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Classic Maya Polychrome Stucco Sculptures from Louisville, Belize

Astrid Runggaldier

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LIST OF ABBREVIATIONS

A.D.	*anno Domini*
B.C.	before Christ
BM	British Museum
M.A.R.I.	Middle American Research Institute
Fig.	figure
Str.	structure

PREFACE

Among the studies of plastic arts mastered by the Maya stuccowork has often been neglected because of its limited preservation in the archaeological record. Nevertheless Maya settlements featured prominent use of this medium from the Preclassic facing of platforms and monumental masks, to the modeled relief decoration of Classic architecture, and the ornamentation of Postclassic façades. In spite of its poor survival, stucco represents one of the finest manifestations of Maya artistic and technological achievement, and the remains from the small site of Louisville in Northern Belize attest to the Maya mastery of this form of art.

The Louisville stuccoes were excavated by amateur archaeologist Dr. Thomas Gann in the mid 1930s. Although they constitute the largest number of modeled human heads from a single Maya building, the collection lacked chronological and stratigraphic context until this work set out to recover the surviving data, before the inevitable obliteration of the site, which in recent years has become increasingly threatened by sugar cane agriculture, quarrying for construction materials, and opportunistic looting.

The lack of detailed provenience for the Louisville stuccoes has no doubt contributed to the obscurity into which both the sculptures and the site have been dropped since their initial discovery. This work seeks to recontextualize this collection of stuccowork and reintroduce it into the body of knowledge and literature on the Maya, so that future discoveries and analyses of Maya stucco will not fail to remember the evidence from Louisville, in spite of the imminent disappearance of the site.

ACKNOWLEDGMENTS

I would like to thank the principal investigator of this project, Dr. Norman Hammond, for his direction and inspiration in the field and throughout the preparation of this publication. The present work is the result of research carried out for my MA thesis at Boston University.

The field research conducted at Louisville would not have been possible without the work of Marc Wolf, Scott Smith, and the students of the Boston University Belize Archaeological Field School of 2000 and of 2002. I am also grateful to Norman Hammond and Kerry Sagebiel for the identification of the ceramics from the 2000 field season, and to Duncan Pring and Lauren Sullivan for the analysis of the ceramics from the 2002 season. Thank you also to the Ramirez sisters, the people, and land owners of Louisville, Belize, who welcomed me to carry out archaeological work in their fields.

My gratitude also goes to the British Museum and the Middle American Research Institute at Tulane University for allowing me to use the images from their collections; to E. Wyllys Andrews V for providing a copy of Gann's 1936 manuscript, and to Messrs. Swaine, Adeney Brigg of St. James's for the analysis of the umbrella spokes. I would like to express gratitude to Raymond and Beverly Sackler for generously funding this work, to Dr. Allan Moore, Archaeological Commissioner of Belize in 2000, and to George Thompson, Archaeological Commissioner of Belize in 2002, for granting permission to carry out the archaeological assessment and salvage operations at Louisville.

I am indebted to Dr. Clemency Coggins for generously allowing me to use her library and I am grateful for her suggestions in the preparation of this publication. Many thanks also to Alex Gantos for his patience, encouragement, and discussions of this material; to Al Wesolowsky for his teachings on editorial work and publications; and to Shannon Plank for sharing long days of office work. Thank you to my family for their support and their faith in my pursuit of a career in archaeology.

Chapter One

Introduction

This work presents the data assembled in an archaeological project carried out at the ancient Maya site of Louisville in northern Belize. In addition to survey and mapping, the project focused on two main goals: to conduct salvage work in order to provide a chronology of the site through surface collection and testpit excavations; and to recontextualize the finds from previous work at the site, in particular by determining through excavation the original location of Thomas Gann's trenches and the source of the stucco heads now held at the British Museum and at Tulane University.

Chapter Two describes the geographical location of the site of Louisville and its environs. Geological and environmental information provides the setting for the type of research that was conducted at the site and the background for the interpretation of the site layout. The geological nature of the area appears to have influenced the planning of the architectural groups at Louisville. The location of the two main pyramids as well as the putative location of a causeway might have been directly related to the shallow limestone ridges and outcroppings that determine the terrain of the site.

Chapter Three introduces the history of research at the site, primarily in terms of the work conducted by Gann because his excavations are directly responsible for the conception of this work. The background information also covers work by other archaeologists and visitors over the course of the 20th century. Eric Thompson, Wolfgang Haberland, Ernestene Green, Norman Hammond, and Raymond Sidrys have all published accounts of the archaeological remains at Louisville, but no systematic investigations had been undertaken until 2000. The danger of losing the evidence to recent agricultural and destructive activities has made this work all the more urgent.

Chapter Four focuses on the collections of stucco material from the British Museum and Tulane University. Each item is described in an annotated catalog and illustrated from available photographs in Appendix B so as to keep all stucco artifacts that were excavated before this project in a single section.

Chapter Five presents the data recovered from the archaeological research conducted in 2000 and 2002. The research design is explained in a section on fieldwork methods, followed by data obtained from mapping, surface collections, testpit and trench excavations concerning the site plan, the ceramic sequence, the stratigraphy, and the context of Gann's collection. In particular, the section on the trench operation conducted at the location of Gann's previous excavations is a description and analysis of the evidence supporting the identification of the building that was once decorated with the stucco heads.

Chapter Six combines the evidence from the catalog of stuccowork and the recently excavated materials. The results are a discussion of the overall chronology of the site from ceramics and other finds, of the architecture at Louisville in comparison to other examples of similar construction methods, and of the stucco materials in relation to other sites where human portraiture has been recovered.

The analysis of evidence recovered from Louisville with this project concludes that the identification of Gann's excavation was indeed successful, and that the collections of stucco heads and fragments have been reunited with their archaeological context.

Three appendices follow the main body of text: Appendix A reproduces the original manuscript of Gann's discovery that was edited for publication; Appendix B groups images of the stucco artifacts from the British Museum and Tulane University; and Appendix C reports the ceramic analysis carried out by Duncan Pring and Lauren Sullivan on the Late Preclassic sherds from a midden found in one of the testpits.

Chapter Two

Geographical Setting

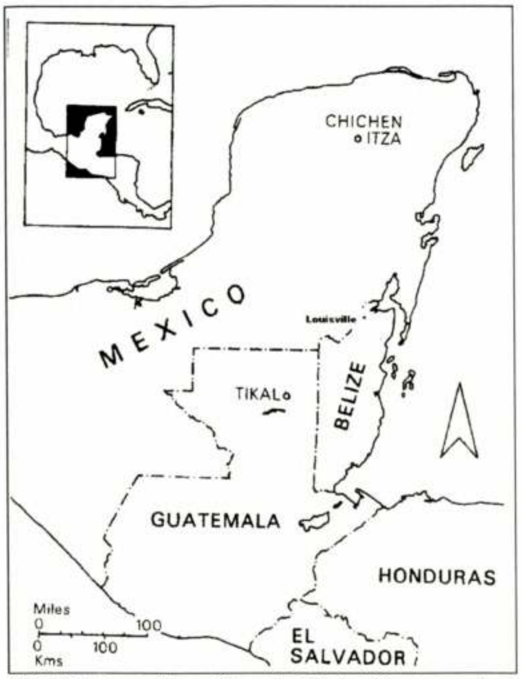


Fig. 2.1. Location of Louisville in Mesoamerica.

The Maya site of Louisville is located in the Corozal District of northern Belize, Central America (Fig. 2.1 and Fig. 2.2), along the Northern Highway, approximately 15 km North of Orange Walk Town and 18 km South of Corozal. The site bears the name of the modern village situated on the western side of the Northern Highway, and it spans both sides of the road. Only a few mounds can be detected among the contemporary houses in the town; the modern church is built directly on top of one of the mounds, while the majority of the mounds, including the ceremonial core, are located on the eastern side of the highway. The mapping project covered an area roughly 1x1.5 km, mostly on the eastern side of the highway, but it is likely other mounds extend beyond this area, and that at one time the site was larger than that visible today.

Northern Belize is relatively flat and uniform, rarely reaching over 20 m above sea level. The area between the Rio Hondo in the east, which marks the political boundary between Belize and Mexico, and the New River, or Rio Nuevo, in the west is a shelf of Tertiary and Cretaceous limestone deposits (McDonald and Hammond 1985: 13; Johnson 1983: 12). These characterize most of northern Belize and are interspersed with Quaternary river alluvium (Fig. 2.3). The site of Louisville is situated on the limestone ridge and is equidistant from the Rio Hondo and the New River, each about 5.5 km away. Sapote Lagoon is 4.4 km directly west of the site, before reaching the Rio Hondo, and the swamps of the Jones and Nicholson area are 1.5 km to the southeast, 4 km before the swamps surrounding the Pembroke Hall branch of the New River and the New River itself (Fig. 2.4).

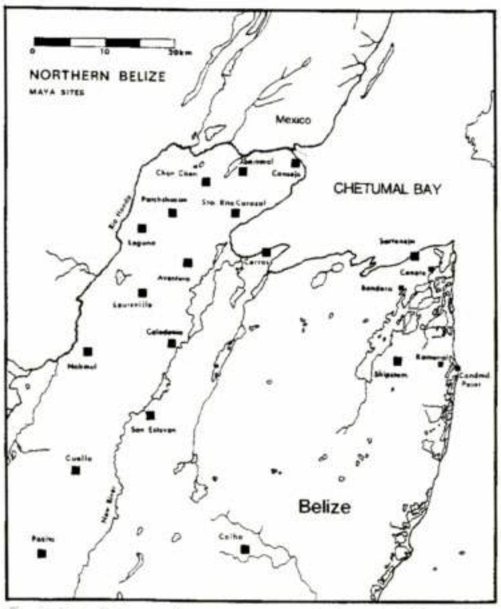


Fig. 2.2. Map of area around Louisville (after Sidrys 1983: 4).

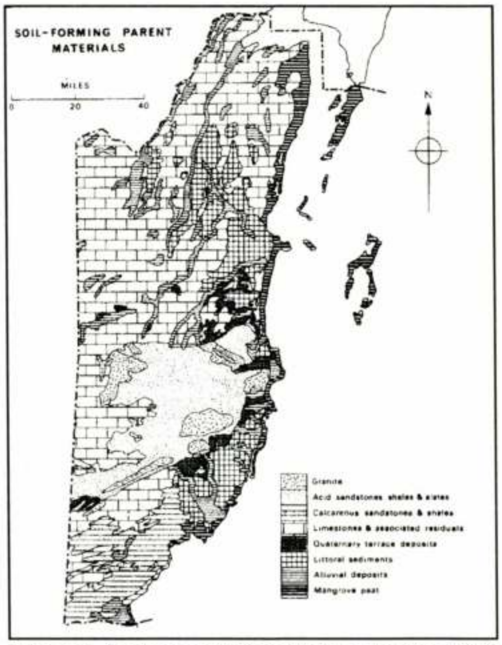

SOIL-FORMING PARENT MATERIALS
MILES
0
20
40
N
Granite
Acid sandstones shales & slates
Calcarenus sandstones & shales
Limestones & associated residuals
Quaternary terrace deposits
Littoral sediments
Alluvial deposits
Mangrove peat

Fig. 2.3. Soil map of Belize (after Furley 1968: 7).

In terms of geological characterization northern Belize is part of the Yucatan Peninsula platform, which is bordered to the south by the much older metamorphic massif of the Maya Mountains. The

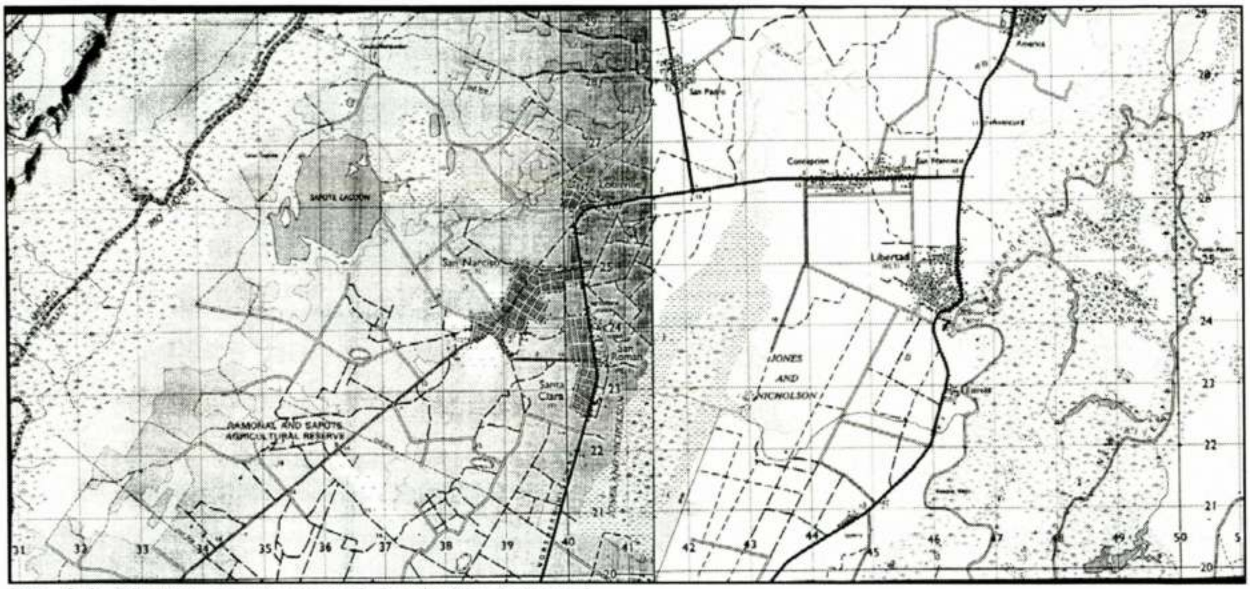
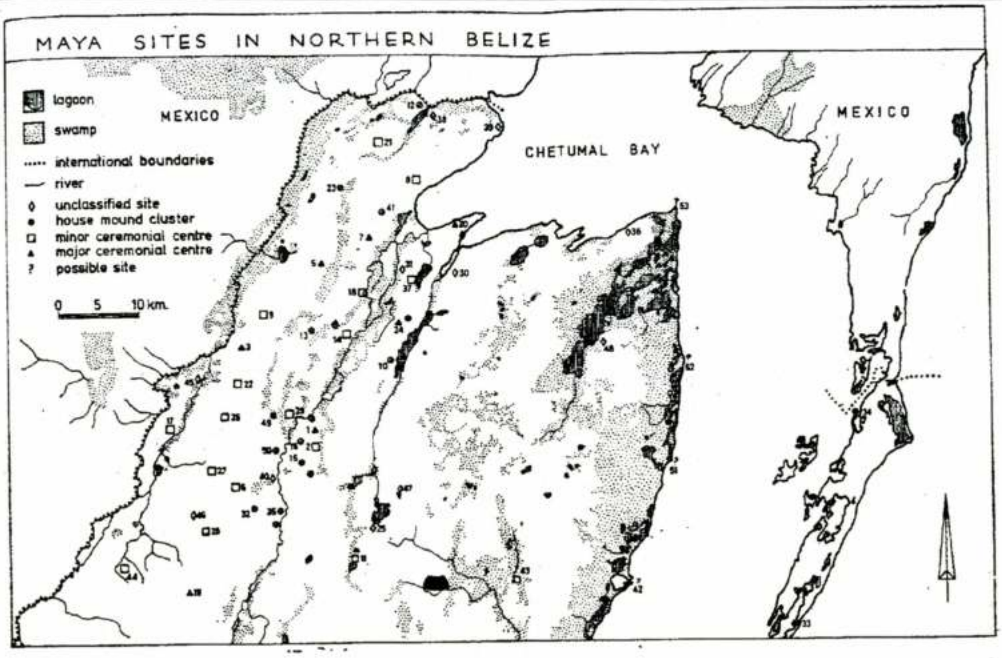


Fig. 2.4. Modern roads around Louisville (adapted from U.K. Military Survey map 1994).

course of the rivers from the mountains, across the limestone shelf, and out to the sea in the north, has determined the distribution of alluvial deposits, which consist mostly of calcareous clays (Hammond 1973: 2). The soils of this area, which are the result of the calcareous parent materials, are typically thin and poorly drained. In particular the soils of the Louisville set, that are part of a group of five similarly derived soil sets, are only 2.5 cm to 50 cm thick, and prone to significant water runoff because underlain by a layer of compact limestone (McDonald and Hammond 1985: 21). The area where Louisville is located is in fact characterized by some poorly understood lenses of unconsolidated limestone that have become compacted and indurated directly below the soil layers (McDonald and Hammond 1985: 14, 20).

The area between the Rio Hondo and the New River, although flat compared to central and southern Belize, is nonetheless defined by an undulating landscape that can be divided into five parallel ridges running Southwest–Northeast, where the highest elevations are found in the southern portion of the westernmost ridges (Hammond 1973: 3). These ridges are an interesting feature because, as Hammond points out, "practically all of the known Maya sites are on the first four, and almost all modern settlements on the first three" (1973: 3), with the numbering running west to east. Most towns are situated on the westernmost, the San Pablo ridge, bordered on the west by the Rio Hondo and running northeast beyond Louisville. The ridge runs without interruptions from the Guatemalan to the Mexican border, and provides any easy travel route that could have been a significant axis of communication and trade for ancient settlements (McDonald and Hammond 1985: 26). Louisville is located on this, as is the major ceremonial center of Nohmul, and a number of other minor centers are scattered along the southern and more elevated area of the ridge (Fig. 2.5). A matrix of distances between sites along the Rio San Pablo ridge has been suggested to represent culturally significant distributions of settlements and ceremonial centers (Harrison 2000: 3-4). Although Louisville is located beyond the northeast edge of the analysis area (Harrison 2000: figure 3), which focuses mainly on sites with possible access to the resources of Pulltrouser Swamp, its relationship to nearby sites such as Nohmul, Buena Vista, and Caledonia fall within at least one of the three "culturally significant distance ranges" proposed by Harrison.

The climate is sub-tropical with 80% humidity, with an average rainfall at Louisville of 1343 mm (53"), and with a dry season of four to five months between January and April or May (Hammond 1973: 2). The original forests associated with the geology and hydrology of the area are almost entirely gone, replaced by vegetation assemblages that resulted from a long history of human activity. Most of the mounds of Louisville that are not located among the buildings and orchards of the modern town are surrounded or covered by sugar cane, extensively cultivated in northern Belize. The plowing and burning regimen of sugar cane cultivation brings pottery and other artifacts to the surface, but also exposes sherds to more intense weathering which results in surface assemblages that



1. *San Estevan*
2. *Chowacol*
3. *Nohmul*
4. *Colha*
5. *Louisville*
6. *Cuello*
7. *Aventura*
8. *Santa Rita*
9. *San Victor*
10. *Progresso I*
11. *Kichpanha*
12. *Santa Elena*
13. *Buena Vista*
14. *Caledonia*
15. *Hipolito Group*
16. *Martinez Group*
17. *San Antonio*
18. *Benque Viejo (Santa Cruz)*
19. *El Posito*
20. *Cerros*
21. *Chan Chen*
22. *San Luis*
23. *Patchchacan*
24. *Progresso II*
25. *Honey Camp (Laguna de On)*
26. *San Lorenzo*
27. *Yo Creek*
28. *San Lazaro I*
29. *Barklog*
30. *Chunox*
31. *Pueblo Nuevo*
32. *Chan Pine Ridge*
33. *San Pedro Ambergris*
34. *San Juan Ambergris*
35. *Bound to Shine*
36. *Sarteneja*
37. *Saltillo*
38. *Sajomal*
39. *Consejo*
40. *Orange Walk*
41. *Carolina*
42. *Spanish Point*
43. *Yakalche*
44. *August Pine Ridge*
45. *San Roman*
46. *San Lazaro II*
47. *Chiwa Lagoon*
48. *Shipstern*
49. *Mile 70*
50. *Indian Hill*
51. *High Bluff*
52. *Condemned Point*
53. *Rocky Point North*

Fig. 2.5. Maya sites in northern Belize (Hammond 1974: 179, used with permission of the author).

have lost their distinctive slips and are more difficult or impossible to identify. Sizeable mounds are also affected by attempts to flatten the area for easier plowing, resulting in the loss of the upper stratigraphic layers of cultural material.

Some of the mounds at Louisville are too large and burdensome to plow over, and are therefore left to be overgrown by bush, with vines and moderate-sized trees such as the cohune palm. Patches of cohune palm forest are generally a good indication of Maya ruins, possibly because their growth and distribution is determined by the calcareous content of the mounds constructed with limestone blocks and marl.

Other mound groups are found in *huamil* that can reach a couple of meters in height. This is the typical vegetation of fallow fields and areas that were plowed in the past, and includes wild papaya trees and thick grasses that completely obscure visibility of the surface scatter of artifacts.

Chapter Three

History of Research

The first mention in print of the site of Louisville appeared in the 1929 Field Museum of Natural History of Chicago *Annual Report of the Board of Trustees* (Thompson 1929: 415-417). J. Eric S. Thompson had become involved in the archaeology of Belize, then the Crown Colony of British Honduras, only a few years earlier with the British Museum's first expedition to southern Belize (Hammond 1983: 21). In 1927 and 1928 he had returned to Belize under the auspices of the Field Museum of Natural History, now Chicago Natural History Museum (Thompson 1928: 215-216; 1929: 415-417). In 1928 he spent the first five months of the year investigating sites for the purpose of gathering information on Maya pottery and its chronological sequence. Among these sites were a few in northern Belize, and he reported that he "began excavations among some small ruins at Louisville, a few miles from Corozal" (Thompson 1929: 417), where he gathered a small collection of artifacts. The objects consist of ten sherds (Fig. 3.1), four chert implements, four obsidian blades, a greenstone celt, and a jade bead (Fig. 3.2); they are now stored in Chicago. The excavations were not described, and soon Thompson moved on to other locations that he believed more interesting (Thompson 1929: 417).

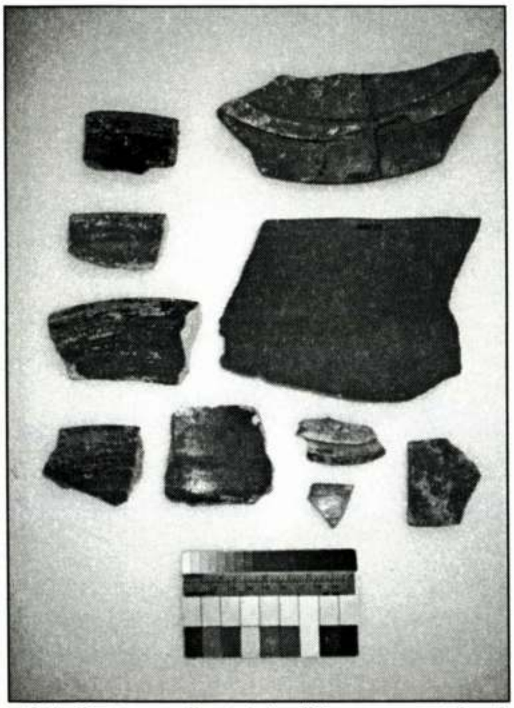


Fig. 3.1. Pottery collected by Thompson at Louisville (photograph courtesy of Norman Hammond).

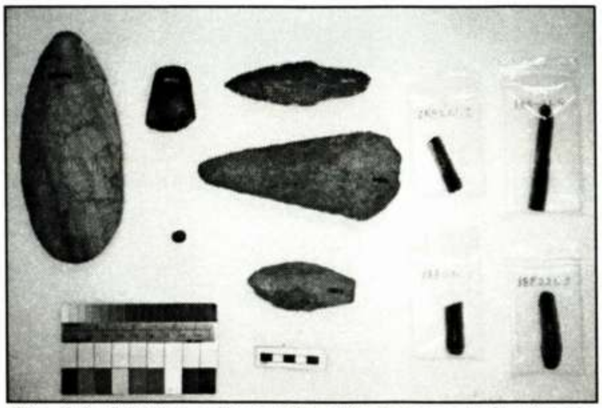


Fig. 3.2. Lithics collected by Thompson at Louisville (photograph courtesy of Norman Hammond).

In that same year Thompson shared part of his travels with Thomas Gann, a medical officer of the Colony with an active interest in archaeology, and together they chartered a boat to carry them up the Belize River to El Cayo (Thompson 1963: 116). Louisville must not have left any particular impression on Thompson, and he must not have told Gann about the site he had just visited because Gann does not seem to have been aware of it until 1935 (Gann 1936), and his writings never mention Thompson's visit.

Thomas Gann was stationed in British Honduras in 1894, and remained there after retirement until shortly before his death in 1938 (Hammond 1973a: 6; Runggaldier and Hammond 2000-2001: 26). He began pursuing his interests in archaeology, and documented his investigations beginning in 1895, continuing to publish about Maya ruins until his death and posthumously both in scholarly publications and in popular books of adventures encountered in his travels in Belize and neighboring countries (Gann 1895; 1897; 1900; 1905; 1911; 1914-16; 1918; 1924; 1925; 1926; 1927; 1928; 1938; 1939; 1943; Gann and Gann 1939). Although Gann might not be considered a representative of the period of the "Major Scholars", as defined by Hammond (1982: 352), his contributions are still useful to archaeologists working in Belize. Unfortunately his less than careful recording methods, and his often hyperbolic writing style have earned him the distrust of professional archaeologists, which may be the reason sites such as Louisville were forgotten for decades. Hammond, who excavated two sites that had been a major interest of Gann's (Hammond 1975; 1985), found that at least the publication for the Smithsonian Institution (Gann 1900) was "by the standards of the time, a sober and responsible field report" (Hammond 1983: 20). Other disagree and believe that "Gann's methods, which because of his principal duty in the country often involved continuing excavation without supervision, remained more destructive than protective of evidence from beginning to end. The combination of this approach with the minimal amount of information available for the Maya area in general gave much of Gann's reporting a distinctive flavor that is none too palatable today" (Pendergast 1993: 4). When they were published, however, Gann's reports and books did impress favorably: his work was described as deserving "high commendation" (A. C. B. 1920: 64), and *In an Unknown Land* was compared to John L. Stephens' books (Long 1925: 78). In the case of Louisville, Gann's publications proved useful in verifying his presence and contextualizing his finds, but there was also significant inaccuracy and inconsistency, part of which may be due to the British Museum's accessioning of both the Nohmul and Louisville materials after Gann's death (Runggaldier and Hammond 2000-2001: 27).

Before excavating at Louisville Gann had investigated mounds at more than 50 sites and had compiled a typology of the different kinds of mounds that consisted of seven categories: sepulchral mounds; mounds containing an oval plastered chamber; mounds erected over buildings; fortified mounds; signal and look-out mounds; refuse mounds or kitchen middens; and mounds of unknown use (Gann 1897: 308). In the same report he described findings from the site of Pueblo Nuevo (Fig. 2.5) which included "two large human heads, moulded in plaster and bearing traces of red and blue colourings" (Gann 1897: 308). In a later report on the same mound at Pueblo Nuevo (Mound 20) he claimed to have found two human torsos, three human heads, and two headdresses (Gann 1918: 112-113). A few years later he described one of these heads and noted that "a number of similar heads were found in the same temple" (Gann 1926: 243).

It was not until 1935 that Gann discovered a large number of stucco heads at the site of Louisville. He and his wife Mary owned a coconut plantation just outside of Corozal, and while living there they had learned (maybe even were contacted by the owner of the land where a large part of the Louisville site is located) that a discovery had been made and "a treasure trove dug from an ancient Maya mound" (Gann 1939: 253). Gann and his wife set out to excavate the mound the land owner was clearing to obtain material for a road, and soon after a report was sent to Tulane University for publication in Volume IV of *Maya Research* (Appendix A).

The building that interested Gann was at the southwestern edge of a plaza with seven mounds (Gann 1936: 1). Just south of the building he excavated is one of two large pyramids, which he never mentioned, probably because he had been alerted to what he called a "treasure trove" and already knew where to dig, or because he considered these to be "look-out mounds" that "never contain any traces of burial, pottry [sic] or implements" (Gann 1897: 311).

Gann identified four periods of construction; the earliest was a stone temple that had been decorated with a frieze of modeled stucco human heads. From this he recovered 41 approximately life-size heads, two torsos, and a number of ornamental stucco fragments along one of the building's walls (Gann 1936: 3). Because of the position of the mound relative to the plaza he assumed this structure had been facing North, and reported uncovering a wall 34 feet long with a four-foot door opening, which he termed the "north wall", and a wall in the west that was 21 feet long; both walls were three feet to no more than six feet in height (Gann 1936: 1). The south and east walls were not found, and Gann interpreted these as having been completely destroyed.

The heads were found detached from the walls, Gann believed, not as the result of weathering and decay, but as the result of:

> [C]onsiderable trouble to preserve the heads, as they were all placed face-downward in the marl dust, and not mutilated more than was absolutely necessary in detaching them from the walls, whereas the stucco mouldings were broken into small pieces and used merely to fill in the later substructure. (Gann 1936: 3)

Gann described some of the heads, their expressions, and their headdresses, and concluded that these constituted an important discovery "as it furnishes us with a sculpture gallery exhibiting the portraits of the men, women, and children who lived and went about their several occupations at this site" (Gann 1936: 5). He divided the portraits into three groups, more or less based on their facial characteristics, and linked these to possible social classes (Gann 1936: 3-4). In his last popular book he carried on the class distinction, "the dominant, or aristocratic, and the coarser, or plebeian", and compared the Louisville heads with skulls from Nohmul, and portraits on Maya stelae where Maudslay identified conquerors and conquered people (Gann 1939: 73).

The stucco heads and other fragments from Louisville were accessioned by the British Museum in 1938, and by the Middle American Research Institute at Tulane in 1939. The 1936 manuscript was not published as expected because the fourth volume of *Maya Research* was never issued, and it was printed only later, in the first volume of *Middle American Research Records*, after significant editing by the editor Robert Wauchope (Gann 1943). Three heads and six stucco fragments from the Tulane collection were included as illustrations (Fig. 3.3), but much of the interpretation and dating suggestions were deleted altogether.

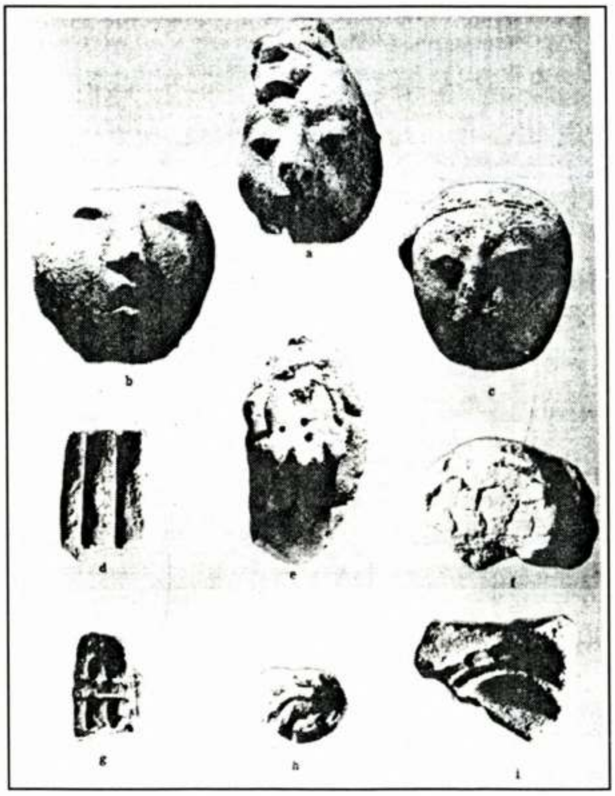


Fig. 3.3. Stucco heads from Gann's excavations (Gann 1943, figure 1, courtesy of the Middle American Research Institute, Tulane University).

Some of the rewording even caused a change of meaning regarding the location of the heads relative to the layout of the structure: Gann had stated that:

> The interior had been covered by a layer of smooth yellow stucco, with elaborate claret-coloured mouldings in the same material. (Gann 1936: 1; see Appendix A for full text)

Wauchope's rephrasing of the same sentence declared that "modeled heads covered the interior" (Gann 1943: 14), although Gann had not specified the location of the "mouldings." It may be, however, that Gann in fact thought the heads were in the interior, after they had been detached from the frieze and buried face-down on the inner floor of the building, subsequently topped by other stucco fragments and rubble, when the structure had been filled in and enlarged.

Gann believed he had excavated the north wall because the south one was gone; I believe, instead, that he exposed the south wall, and never excavated far enough to find the northern one. In this scenario, the heads that he interpreted as lining the interior of the north wall would actually have been on the exterior of the south wall. It is not certain that all 41 heads would have decorated only the south wall; if one considers their size relative to the length of the mound, the arrangement of the heads on the southern façade must have been stacked in order to fit them all.

Alternatively, it is possible that the heads came from three if not four sides of the building, arranged like a frieze running along the top edge of the walls, and that they were in fact, as Gann suggested, detached and buried all along one wall, cached in a line in the interior. The different state of preservation of the individual heads (see Appendix B) indicates that they might have been exposed to different weathering patterns, such as would occur if they were attached to walls facing different cardinal directions. Nevertheless, the front of the structure, decorated with an elaborate stucco frieze, would have looked onto the pyramid just south of this building.

The popular posthumous book *Glories of the Maya*, published in London in 1938, included the description of Louisville in its last chapter, differing from the manuscript report only in embellishment of the writing style (Gann 1939: 235-259). This however included photographs of eight heads and two fragments, which were among the British

Museum holdings (Figs. 3.4, 3.5, and 3.6). In the same year that Gann's book was published in the United States, Thompson published his San Jose monograph with an appendix listing the Maya sites of Belize and investigations that had been carried out at each (Thompson 1939: 278-282). The short description of Louisville, based on his own Field Museum expedition and on Gann's excavation, included the location of collected artifacts and mentioned Ramirez, the landowner, who had accumulated materials from the site. *Glories of the Maya* was probably not printed yet, but Thompson possessed a copy of the 1936 manuscript, which Gann had likely given him. The appendix also included the first map of sites in Belize, and one of the few maps to this day that feature Louisville (Fig. 3.7).

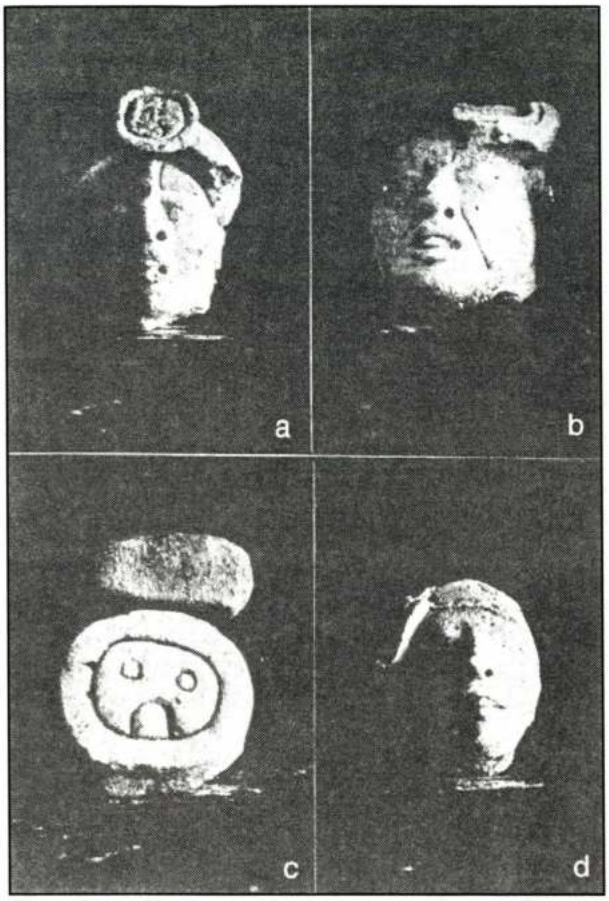


Fig. 3.4. Heads and fragments from Gann's excavations (after Gann 1939: 254).

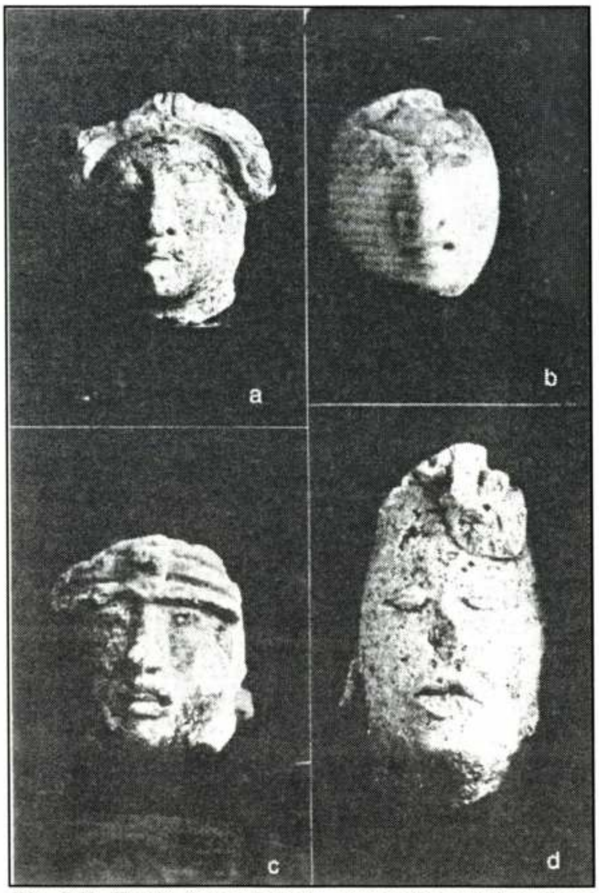


Fig. 3.5. Heads from Gann's excavations (after Gann 1939: 256).

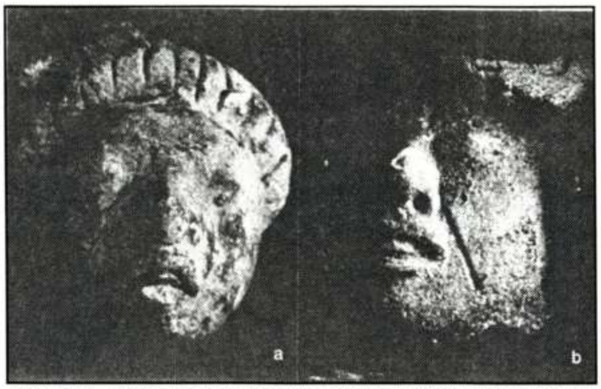


Fig. 3.6. Heads from Gann's excavations (after Gann 1939: 258).

Nearly twenty years passed before another archaeologist visited Louisville. Wolfgang Haberland spent only a day at the site, accompanied by the Archaeological Commissioner Hamilton Anderson, and met the landowner Ramirez, who showed them the collection of pottery he had accumulated while clearing for sugar cane, which included two Preclassic "chocolate pots" (Fig. 3.8). Haberland reported a round structure with an inset staircase (Fig. 3.9) that was discovered when Ramirez attempted to level a mound near his house with a tractor (Haberland 1958: 128). The round platform, an unusual feature, sparked Haberland's interest and he collected some sherds from the fill to

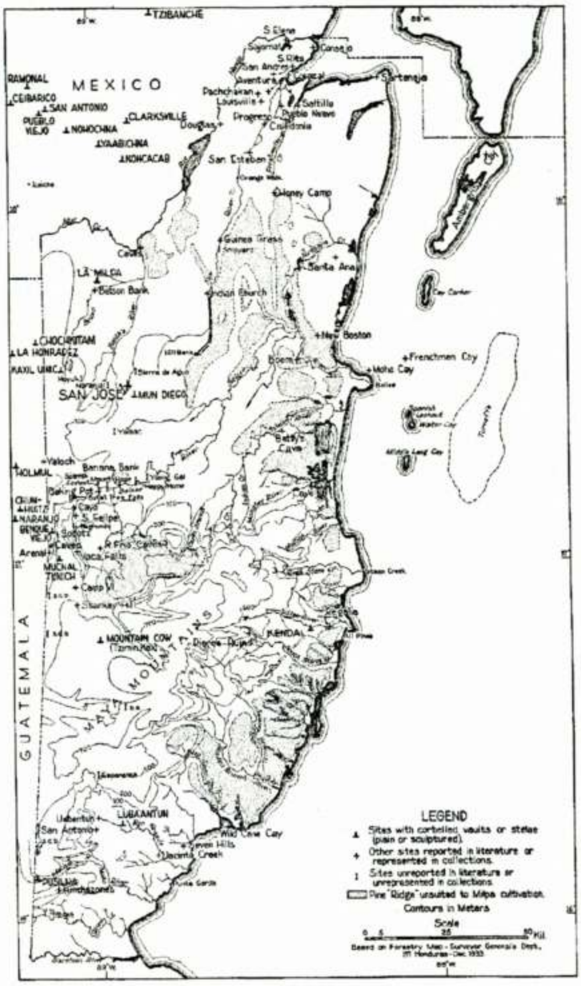

MEXICO
GUATEMALA
Louisville
San Esteban
Progreso
Corozal
LUBAANTUN
LEGEND
Sites with corbelled vaults or stelae (plain or sculptured)
Other sites reported in literature or represented in collections
Sites unreported in literature or unrepresented in collections
Pine Ridge unsuited to Milpa cultivation
Contours in Meters
Scale

Fig. 3.7. Map of Belize sites known to Thompson (after Thompson 1939, figure 100).

establish a date for the construction, which he placed in the Middle Preclassic (Haberland 1958: 129). Unfortunately, Haberland also reported that "shortly afterwards and well before anything by the way of scientific excavation could be done, a hurricane destroyed the pyramid as well as the very interesting private collection of Mr. Ramirez" (Haberland 1958: 129). The year of his visit was 1954, and in 1955 hurricane Janet hit the northern part of Belize, and destroyed most of Corozal.

In the summer of 1971 Ernestene Greene investigated 22 sites in northern Belize by carrying out surface survey and excavating test trenches, in an effort to establish by regression analysis a relationship between the location of the sites and their proximity to agricultural land and water sources (Greene 1973: 279-293). Among those sites was Louisville, identifiable only on the published map, since a list of the sites was not included in the report and the conclusions were drawn from the lot of sites as a whole (Greene 1973: 280). At least two 1x1 m test pits were dug at Louisville that could still be identified in the spring of 2000.

Two years after Greene's investigations the British Museum-Cambridge University Corozal Project, lead by Norman Hammond, carried out a reconnaissance at a number of sites including Louisville (Hammond 1973b: 21). Only the two major pyramids were located; the rest of the site was not visible in the aerial photographs or on the ground because under heavy secondary bush and sugar cane crops. The ceramic sequence, from surface collection, was described as similar to San Estevan and possibly extending into the Late Classic (Hammond 1973b: 21; Hammond et al. 1973: 61).

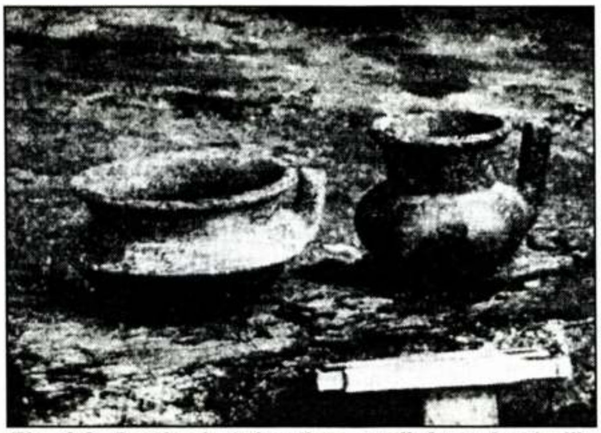


Fig. 3.8. Preclassic "chocolate pots" from Louisville (after Haberland 1958: 128).

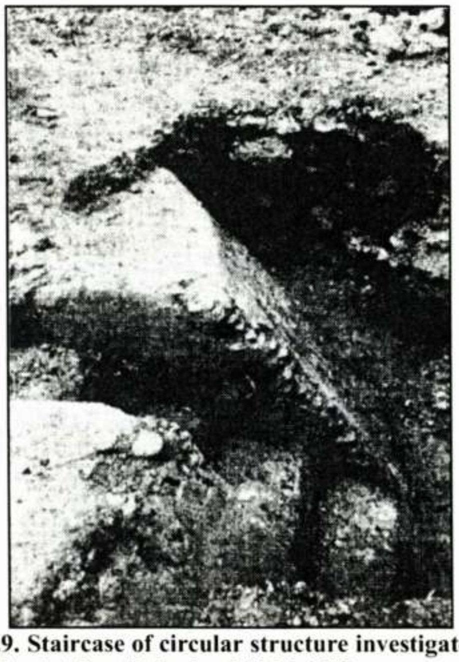


Fig. 3.9. Staircase of circular structure investigated by Haberland (after Haberland 1958: 128).

In 1974 an archaeological survey of northern Belize conducted by the University of California at Los Angeles also investigated many of the same sites, and although Louisville was part of the research area, it seems to have been addressed solely through already published data (Sidrys 1983). Louisville was not one of the twelve mapped and sampled sites, and although included in the maps, it was referred to only in comparison to Chan Chen, just 17 km northwest of Louisville, where a round platform, dating to the Early Classic, was identified and excavated (Sidrys 1983: 92-103; Sidrys and Andresen 1978: 638-650). Louisville, it was suggested, contained 20 to 99 mounds, and was "clearly a deserving candidate for future fieldwork" (Sidrys 1983: 19, 395). The round structure at Louisville was also recently included in a study of Preclassic round structures in the upper Belize River valley (Aimers, Powis, and Awe 2000: 72), and the site, usually absent from most maps, was mentioned in a review of archaeological research in northern Belize, although this did not mention the stucco heads (Nondedeo 1998: 18, 72). Haberland's short visit and his publication in the "Shorter Note" section of *Man* made a more lasting impression than Gann's excavation and his unique finds.

Following an inspection of the site by Hammond in 1998, the need to record and investigate the extant mounds of Louisville became apparent because of the neglect and destruction that was seriously affecting the preservation of information to be gained from this and similar sites. During the 2000 and 2002 field seasons of the Boston University Cuello and La Milpa Projects, Louisville was mapped, surface collections were gathered, five test pits were dug, and one trench was excavated in the location that had been Gann's stuccoed building.

Chapter Four

Stucco Finds from Gann's 1936 Explorations

The term stucco is being used here in the same sense of functional differentiation from plaster that was used for the analysis of Structure 1-sub at Dzibilchaltun:

> This report makes no distinction between plaster and stucco as far as composition is concerned since no technical analysis is available. The only distinction is functional: plaster refers to the crushed lime and water coating used on floors and walls, whereas stucco refers to the same or a similar material when it is used for decorative purposes, principally on the facades of masonry structures. (Coggins 1983: 9)

Norman Hammond photographed the British Museum collection of stucco finds from Louisville in 1986, and the collection at Tulane University a year later. Of the 41 heads that Gann described finding, only 21 are known to exist: 18 at the British Museum and three at Tulane. The 18 heads at the British Museum include a monkey head, never mentioned by Gann, and it is unknown whether he included it in the count of 41 heads or not; they also include a head labeled as Louisville, but certainly coming from Pueblo Nuevo. Two heads from Pueblo Nuevo are labeled as such and stored at the British Museum; this third head would be congruent with Gann's mention of finding three heads there (Gann 1918: 113). Therefore, not counting the monkey head and the mislabeled head from Pueblo Nuevo, only a total of 19 heads survive from the 41 originally found by Gann.

Of the "missing" heads only one was photographed and included in *Glories of the Maya* (Gann 1939: Plate 256), but it is neither in the British Museum nor in the Tulane collection, and the published photograph is the only surviving record. Gann also mentions finding two torsos, but only one is in the British Museum. At Pueblo Nuevo he mentions finding two torsos as well, one of which was photographed in England along with part of a headdress (Gann 1918: 113), but neither the two torsos nor the headdress fragment are in the British Museum. Gann also mentions among the heads two that are those of the gods Tlaloc and the "Long-Nosed" god (Gann 1939: 256; 1943: 14), but he does not illustrate these, nor does he describe whether they were the same size as the other stucco heads.

Of all the finds from Louisville only eight heads and one fragment were published, and from Pueblo Nuevo one head, one torso, and a partial headdress.

Aside from the heads and one torso, the British Museum collection includes three stucco fragments that could be glyphic. At Tulane the collections include three heads, and 15 stucco fragments, only one of which is recognizably glyphic.

The following catalog describes first the British Museum holdings and then the Tulane University collection, organized in roughly numerical order, with the lower accession numbers first. The Louisville heads at the British Museum are described before the other fragments, so the latter are out of order in the numerical sequence. I have chosen to follow the accession numbers as organizing principle to the catalog because in the absence of contextual information for these artifacts I preferred not to describe them by groups of interpretive categories based on perceived similarities or differences. The description and analysis rely on a collection of photographs taken by Norman Hammond in the mid 1980s; the identification of colors, therefore, can only be assessed visually, and although it is possible to detect at least two shades of red, one of which is what Gann called "claret", pigment identifications were not possible at this time.

The stucco heads and fragments are illustrated in color in Appendix B, using photographs courtesy of Norman Hammond, and identified by their own figure numbers preceded by "B". A schematic line drawing accompanies the catalog descriptions below to point out some of the features that distinguish one stucco head from another; previously published images are also mentioned. Fragments from Tulane University are illustrated by color photographs in Appendix B.

In the British Museum

Accession No.: BM38-10.21.333 (Fig. 4.1a and 4.1b; Appendix B Figs. B-1a and B-1b; see also Fig. 3.4a)
Dimensions (width x height): 18x24 cm

Provenience: Louisville
Published: Gann 1939 Plate 254
Description: stucco; red, blue, black, and white paint

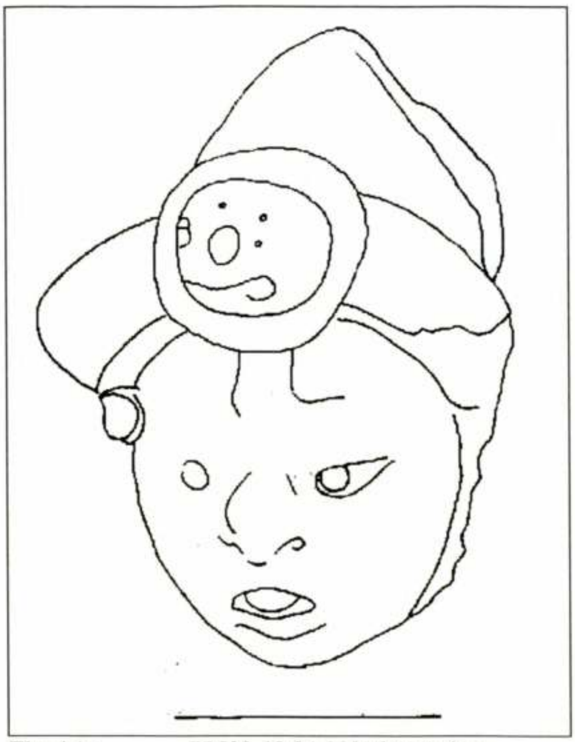


Fig. 4.1a. **BM38-10.21.333; front view.**

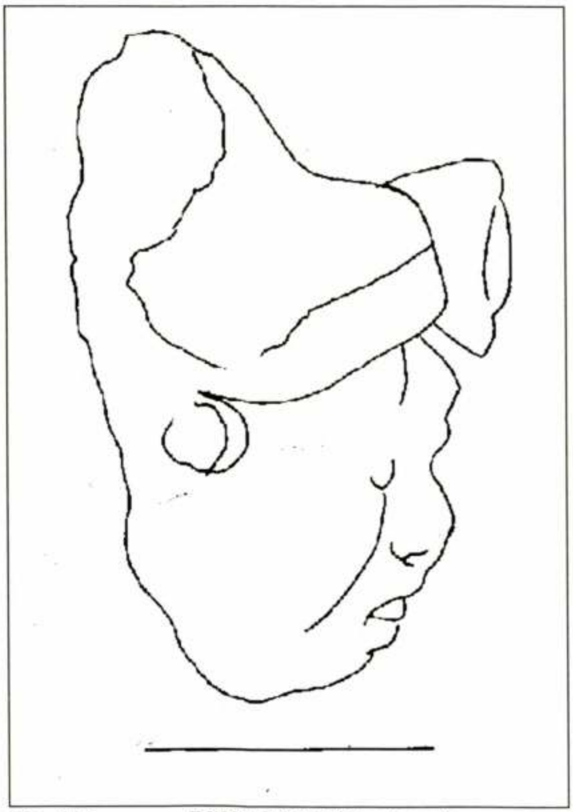


Fig. 4.1b. **BM38-10.21.333; side view.**

This is one of the most complete heads, roughly life-size, with a headdress that Gann described as "a horseshoe-shaped fillet worn over the forehead with the ends hanging down to the ears; in some cases this was crowned by a round medallion" (Gann 1939: 254). The round medallion in this case is clearly the day sign *cimi*, or death, painted red and infixed onto the blue-painted headdress. The presence of a death sign is not necessarily an indication that the individual was dead or in any way related to death; it might simply be the name of the person, taken perhaps from the day of birth.

The eyes are painted with black pupils on a white background, not closed as Gann suggested of the majority of these heads, which he believed for this reason to be death masks (Gann 1939: 255). This individual has a round face, painted red, puffy cheeks, and a receding chin, and was carefully modeled to show the detail of the parted lips, with either a projecting tongue, or perhaps filed teeth.

Accession No.: BM38-10.21.395 (Fig. 4.2; Appendix B Fig. B-2; see also Fig. 3.6a)
Dimensions: 16.5x22.5 cm
Provenience: Louisville
Published: Gann 1939 Plate 258
Description: Stucco; red, blue, and black paint

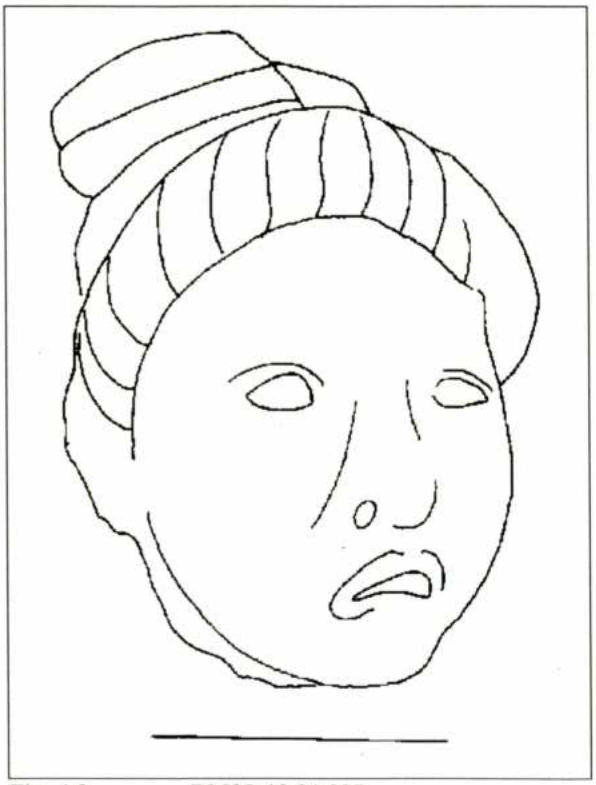


Fig. 4.2. **BM38-10.21.395.**

This head appears to be that of a woman, with an elaborate hairstyle or bolster headdress held in place by a device painted in "Maya blue", an organic dye of indigo fixed with inorganic clay (Fuente 2001: 430). The face is also carefully painted, with dark red and black on the down-turned lips, dark red circles on the cheeks, and dark blue or black lines along the top of the forehead and under the eyes. Gann wrote about this particular head that the decoration was "probably representing the sort of face painting she had used in life" (Gann 1939: 254-255). This is also one of the most complete heads, life-size, and rendered almost in the full round. It is the most convincing candidate for a portrait of a woman, although hairstyles and face decorations are not indicative of one or the other gender, even if Gann was convinced that women, as well as men and children, both of the aristocracy and the slave classes were represented here (Gann 1939: 255).

Accession No.: BM38-10.21.396 (Fig. 4.3; Appendix B Fig. B-3; see also Fig. 3.5a)
Dimensions: 21.5x22.5 cm
Provenience: Louisville
Published: Gann 1939 Plate 256; Hammond and Runggaldier 2000: 494; Runggaldier and Hammond 2000-2001: 26
Description: Stucco; red, blue, and black paint

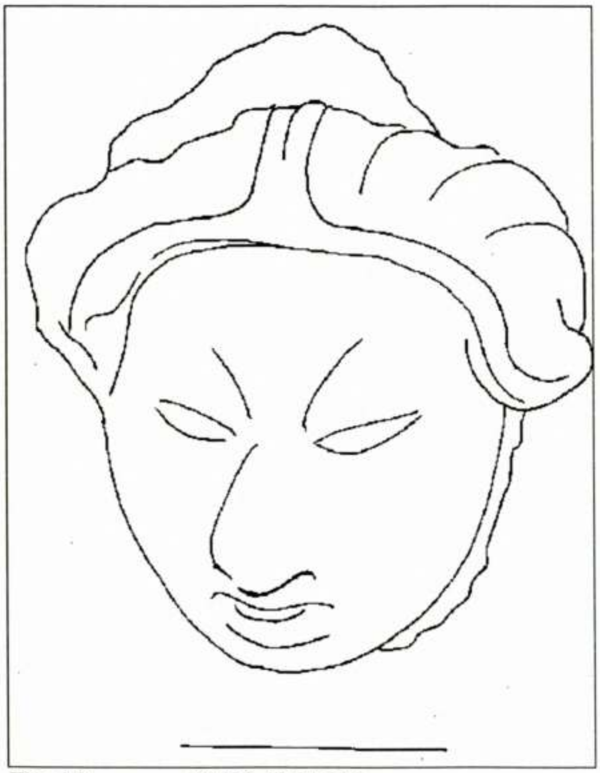


Fig. 4.3. **BM38-10.21.396.**

This head—also life-size and relatively wider than the two previously described—shares with them similar facial attributes, a wide nose, down-turned lips, and a receding chin. The eyes have carefully rendered eyelids, slightly lowered, but not closed as Gann had suggested of the majority of these heads. The face is painted red throughout, including most of the headdress. This consists of a cartouche-like device that frames the face, with stucco modeling that appears to portray a soft material, perhaps feathers. The headdress is bordered by a band painted in Maya blue that runs along the edge of the face and rises centrally from the top of the forehead.

Accession No.: BM38-10.21.397 (Fig. 4.4; Appendix B Fig. B-4; see also Fig. 3.5c)
Dimensions: 18x19 cm
Provenience: Louisville
Published: Gann 1939 Plate 256
Description: Stucco; red, blue, and black paint

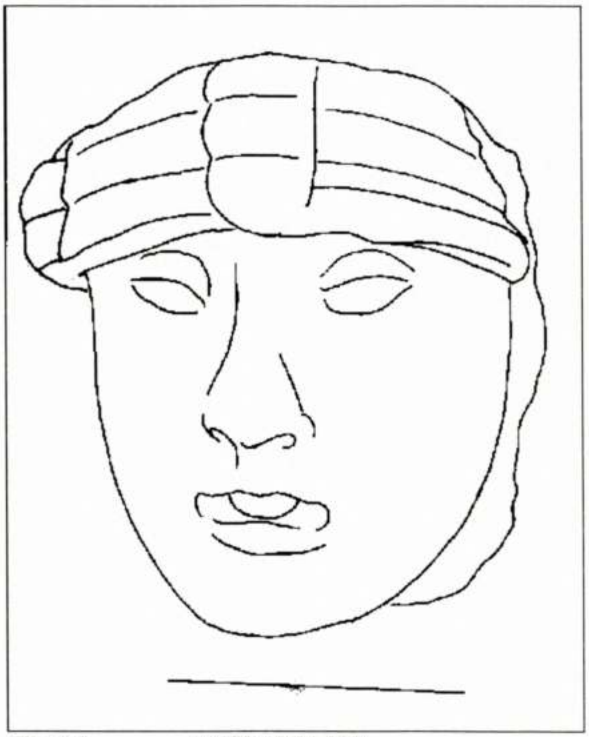


Fig. 4.4. **BM38-10.21.397.**

This is another head with a well-preserved red wash on the face. The eyes are open and the pupils painted black. The nose is wide, with somewhat flaring nostrils, and the lips are parted, with carefully rendered teeth and tongue. The teeth are similar to those of BM38-10.21.333 (Appendix B, Fig. B-1a), which perhaps represent filing.

The headdress sits lower on the forehead than all other representations in this collection. It consists of a triple band painted in Maya blue with red edges, and infixed with a central item. The latter does not seem to have been a medallion like that on BM38-10.21.333, although one could have been attached and now fallen off. Rather, because of the three-part scoring on this central portion, which parallels the rest of the headband, it could represent a knot in a headdress made of cloth.

Accession No.: BM38-10.21.398 (Fig. 4.5; Appendix B Fig. B-5; see also Fig. 3.4b, and 3.6b)
Dimensions: 16x20 cm
Provenience: Louisville
Published: Gann 1939 Plate 254 and Plate 258
Description: Stucco; red, and black paint

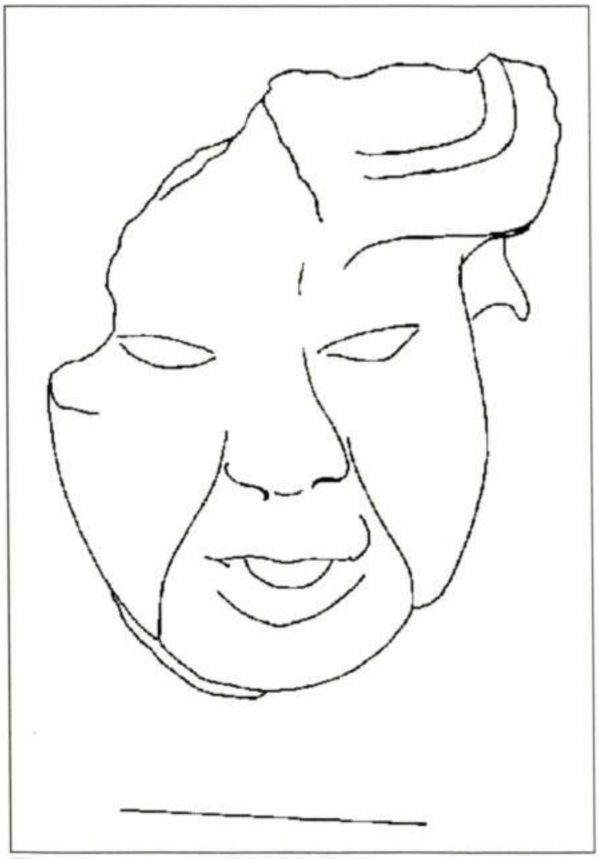


Fig. 4.5. BM38-10.21.398.

This head is not as well preserved as others: the red paint on the face is quite weathered, and there are traces of black paint around the eyes, but it is unclear whether the pupils were painted black. Also, while the face is almost all preserved, the headdress is mostly missing, and only a small portion of it survives. This is nonetheless very interesting because it seems to depict a leaf of maize, possibly sprouting from a cleft in the forehead. Uncut ears of corn and sprouting leaves depicted as the human head of the Maize God are a common motif at sites such as Palenque (Fig. 4.6) and Copan (Fig. 4.7).

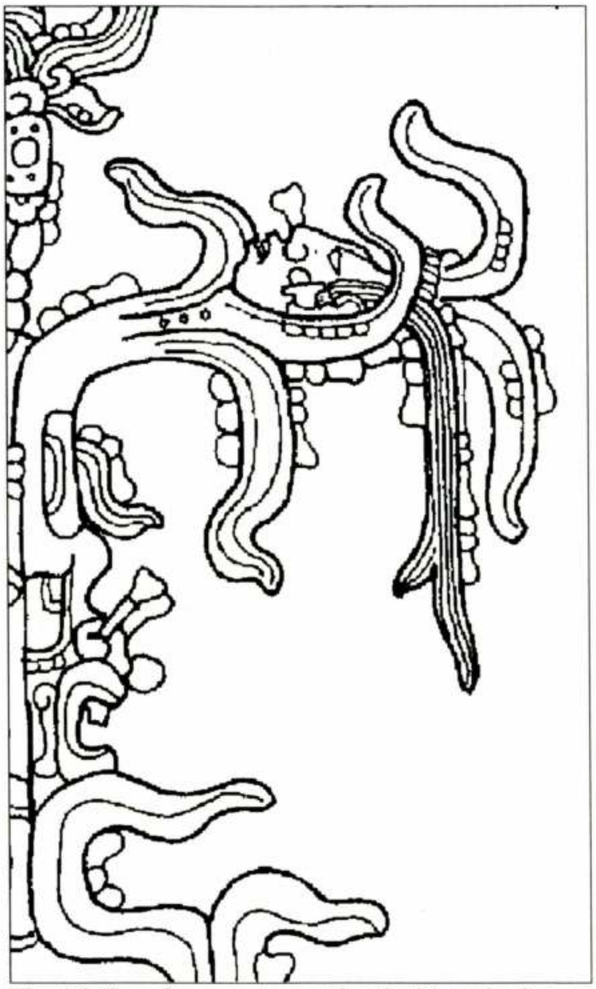


Fig. 4.6. Ear of corn as human head with maize leaves; detail from Temple of the Foliated Cross, Palenque (after Schele and Miller 1986: 195).

This head could be that of a human being impersonating a maize deity, or it could be a representation of the Maize God himself. The Maize God is in fact one of few deities that are depicted with human faces. As Baudez states "anthrpomorphs have grotesque faces, with the following exceptions: creatures representing maize have young idealized faces, but differ from humans in that they have maize husks in the place of hair" (Baudez 1994: 266). In this case the representation may not be that of an idealized face, although the deep marks highlighting the round cheeks suggest that this individual is possibly a young man, or even a child. The size of the face is slightly smaller than the heads described above, and just under the size of the face of BM38-10.21.395, the possible woman.

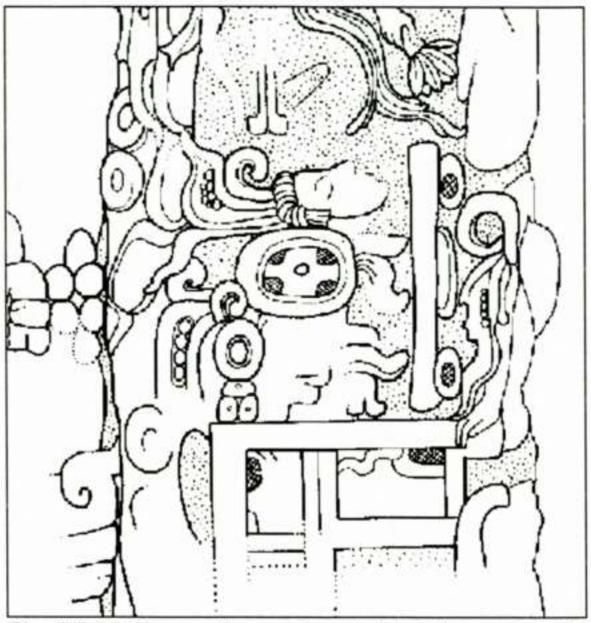


Fig. 4.7. Maize as a human head; detail from east side of Copan Stela D (after Baudez 1994: 41).

Accession No.: BM38-10.21.399 (Fig. 4.8; Appendix B Fig. B-6; see also Fig. 3.4d)
Dimensions: 15.5x20 cm
Provenience: Louisville
Published: Gann 1939 Plate 254
Description: Stucco; red paint

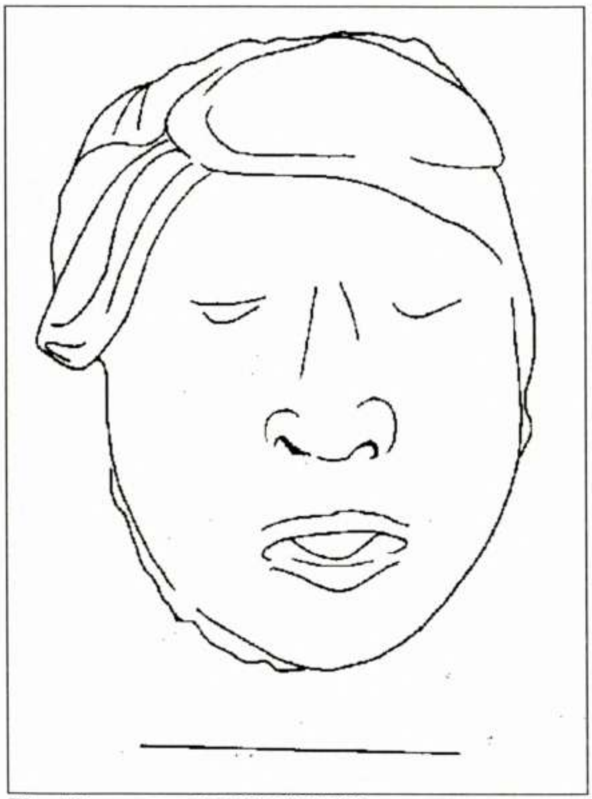


Fig. 4.8. BM38-10.21.399.

A fairly complete specimen, this head seems to have undergone heavy weathering, and lost much of its surface finish and details. Traces of red paint are visible on the lower part of the face, and on the headdress. This appears to consist of a cap, or cloth wrap, that terminates with a tied end or a tassel to one side. The facial features are delicate and not heavily marked, possibly the result of weathering, which has affected the area around the eyes and made these almost indistinguishable. The nose is different from the wide and rounded noses of the heads so far described; this is longer, narrower, and aquiline, reminiscent of the typically Maya noses depicted, for example, in the sculptures of Palenque. The face is oval in shape and the chin not receding; the mouth is depicted in similar fashion to the mouths of the heads described above.

Accession No.: BM38-10.21.400 (Fig. 4.9, Appendix B Fig. B-7; see also Fig. 3.5b)
Dimensions: 15.5x19 cm
Provenience: Louisville
Published: Gann 1939 Plate 256
Description: Stucco; red paint

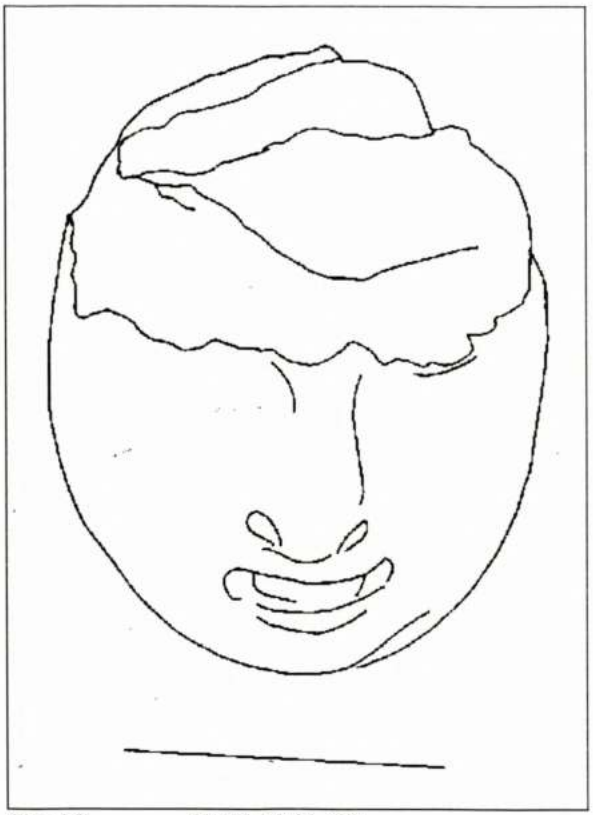


Fig. 4.9. BM38-10.21.400.

This is one of the small heads in this collection, comparable with the previous one in size. The shape of the face is oval, and the nose is again wide and round with flaring nostrils. The upper part of the face, including the eyes and the entire headdress are gone, but the breakage shows an interesting feature of manufacture: the face is shaped from a layer, roughly 2 cm thick, of stucco applied onto a core of perhaps rougher plaster or lime aggregate. Only very faint traces of red paint remain around the nose and mouth. Overall the features of this face seem very smooth and more stylized than other heads, and the traits suggestive of portraiture for most of the other heads are absent here.

Accession No.: BM38-10.21.401 (Fig. 4.10; Appendix B Fig. B-8)
Dimensions: 16.5x15.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red paint

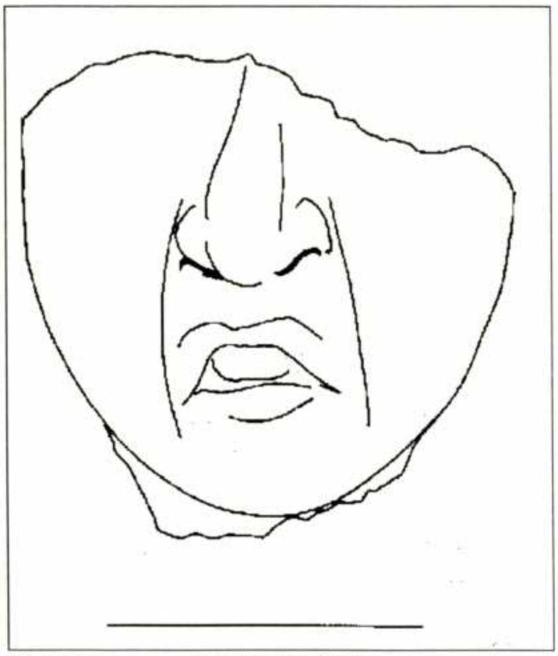


Fig. 4.10. BM38-10.21.401.

The previous head, with its barely marked features, contrasts with this one, which looks likely to have been a portrait in spite of the fact that only a fragment of the face remains. The face is broken at the top of the nose below the eyes, and the rest of the head and headdress do not survive. The surface is weathered and the red paint survives only in patches, but the features show that this head must have been modeled with significant care to portray the facial details. The mouth is strongly down-turned and slightly asymmetric, and the nose is long, narrow, and similar to BM38-10.21.399 (Fig. B-6). Although only part of the head is preserved, among the Louisville heads this one appears to be the most similar in the shape of the features to some of the Palenque stucco portraits of rulers (Fig. 4.11) because of the nose, and the long and narrow proportions of the face, which differ from the round faces and wide noses of the majority of heads from Louisville.

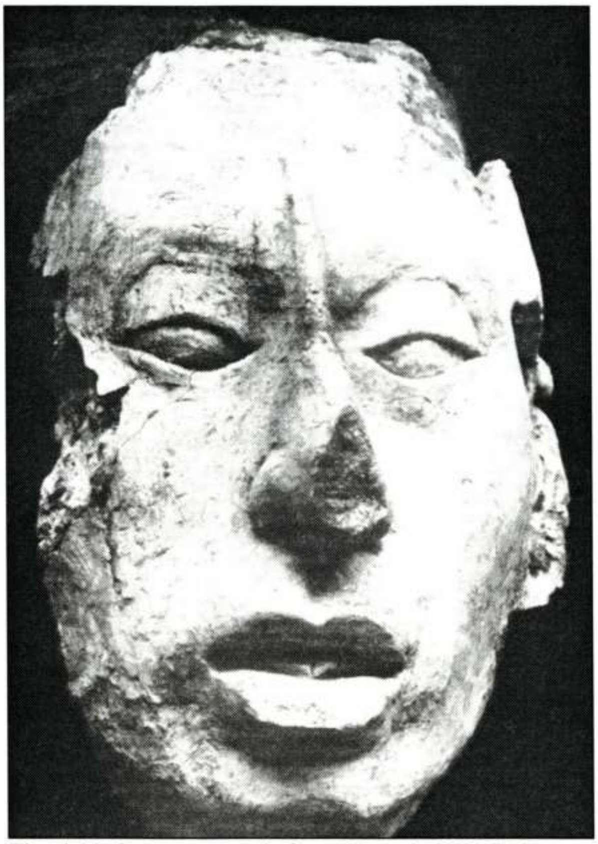


Fig. 4.11. Stucco portrait from Temple XIV, Palenque (Schele and Miller 1986: 64, © Justin Kerr 1985, used with permission).

Accession No.: BM38-10.21.404 (Fig. 4.12; Appendix B Fig. B-9)
Dimensions: 14x17 cm
Provenience: Louisville
Unpublished
Description: Stucco; red paint

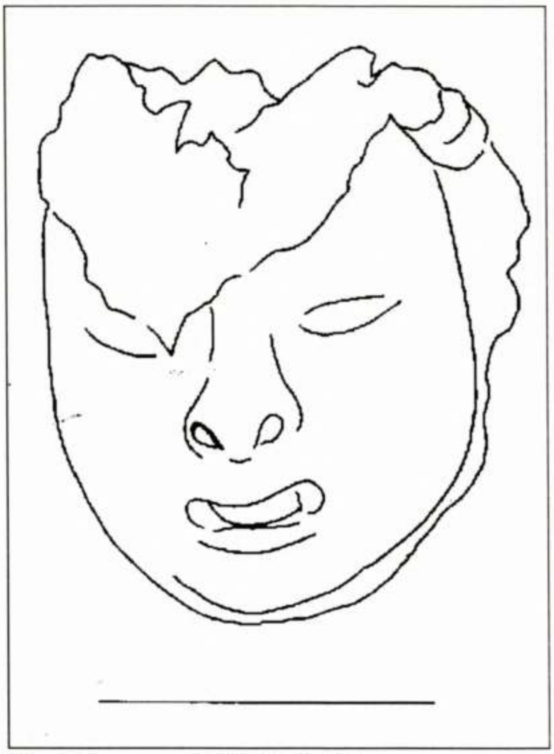


Fig. 4.12. BM38-10.21.404.

The headdress on this head is destroyed, broken to just above the eyelid on the figure's right eye. What remains is most of the face, life size, although the red paint is blotchy, and the area around the eyes is very weathered. The eyes themselves have lost definition, and only very faint traces of paint, possibly black, are visible where the pupils would have been. The nose is wide with flaring nostrils and the lips are parted, showing the teeth.

Accession No.: BM38-10.21.405 (Fig. 4.13; Appendix B Fig. B-10)
Dimensions: 12.5x17 cm
Provenience: Louisville
Unpublished
Description: Stucco

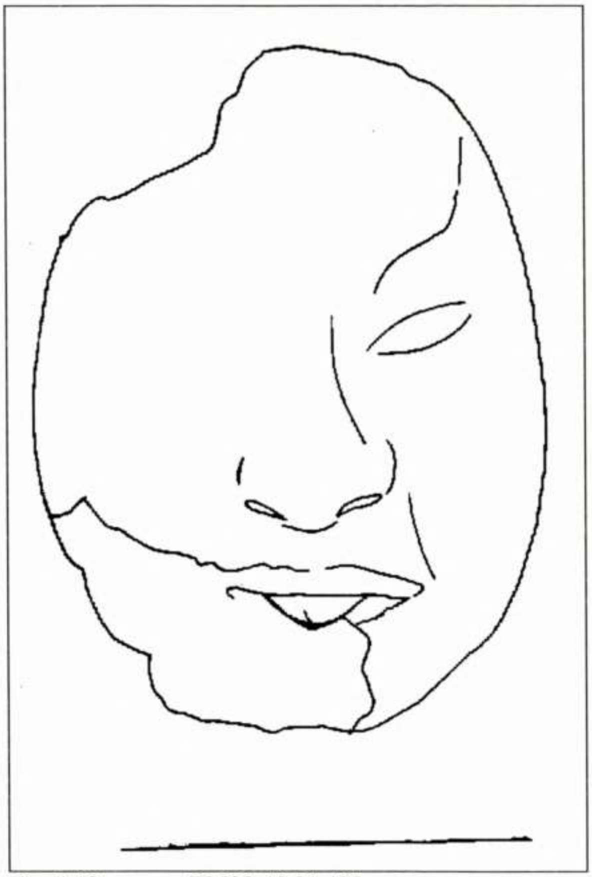


Fig. 4.13. BM38-10.21.405.

The facial features of this head are very similar to BM38-10.21.399 (Appendix B, Fig. B-6) in that they are not strongly marked, and possibly the result of weathering. As in the other head, the eyes are nearly invisible and the surface is very smooth. On this head there are virtually no traces of red paint, although by comparison with the others it is possible that this one was also painted at one time. The size of this face is smaller than BM38-10.21.399, and it seems to have had no headdress for the forehead ends in a smooth rounded edge and there are no fragments of decorative elements. A portion of the forehead is broken off, as is the lower right cheek and chin. The mouth is only half preserved, but enough to see that it is rendered in the same manner as in the other heads; the lips are parted showing either the tongue or upper teeth. If these are teeth, in this example they seem, more than in the other heads, filed to a point reminiscent of the manner in which the Sun God is usually depicted, with *tau*-shaped filed front teeth (Fig. 4.14a and 4.14b).

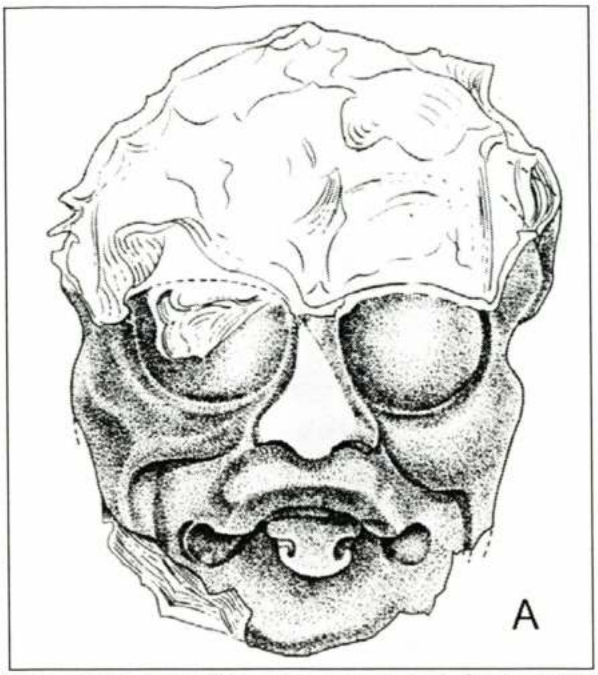


Fig. 4.14a. Sun God with *tau*-shaped front teeth; example from Seibal (Smith 1982: 35, fig. 47E left. Copyright 1982 by the President and Fellows of Harvard College).

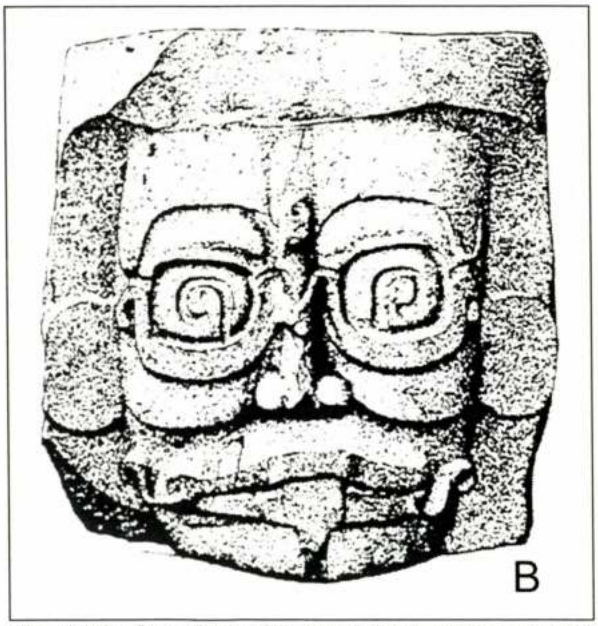


Fig. 4.14b. Sun God with *tau*-shaped teeth; example from Oxkintok (after Vidal Lorenzo 1999: 66).

Accession No.: BM38-10.21.406 (Fig. 4.15; Appendix B Fig. B-11)
Dimensions: 15.5x16.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red paint

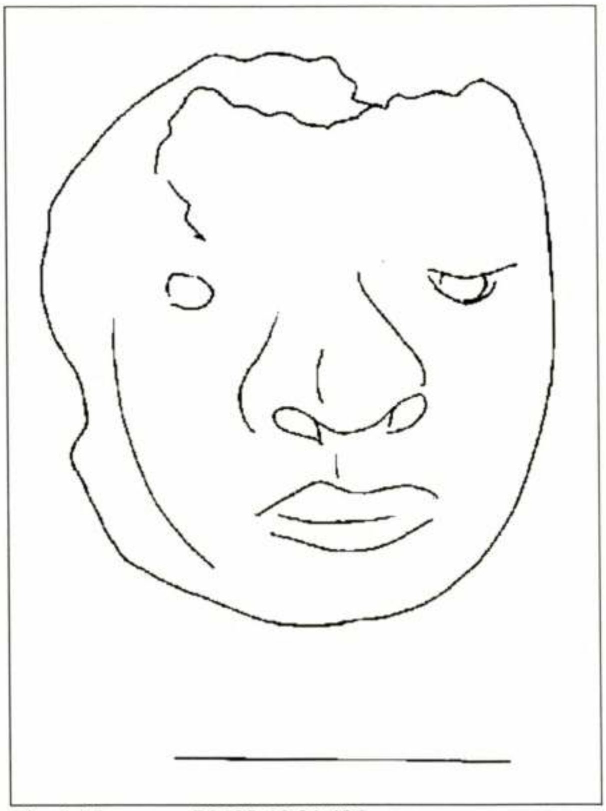


Fig. 4.15. BM38-10.21.406.

This is one of the heads in the poorest of conditions: the top of the head and headdress are gone, traces of red paint are visible in particular on the chin but the surface is otherwise heavily weathered, and the eyes are faintly marked, as in BM38-10.21.399 and BM38-10.21.400. The latter is remarkably similar to this head, and if the top of the forehead were not broken, they would have the same dimensions. The nose and the mouth are essentially the only visible features in this example, and the nose, wide with flaring nostrils, appears somewhat large compared with the rest of the facial proportions.

Accession No.: BM38-10.21.407 (Fig. 4.16a and 4.16b; Appendix B Figs B-12a and B-12b)
Dimensions: 13.5x18.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red paint

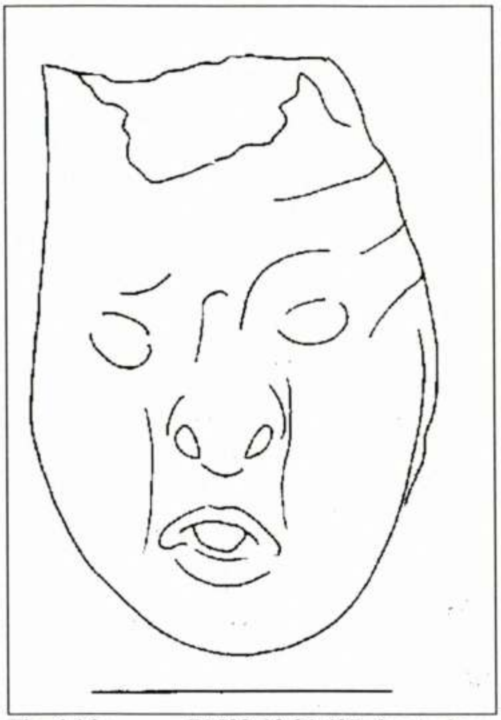


Fig. 4.16a. BM38-10.21.407; front view.

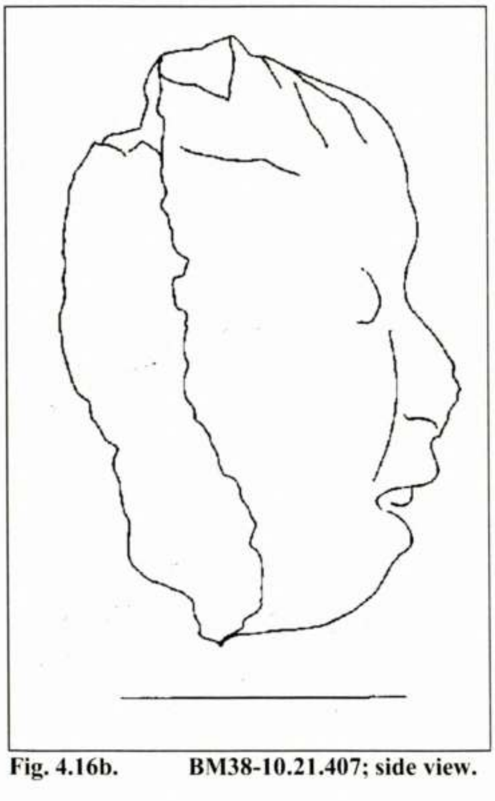


Fig. 4.16b. BM38-10.21.407; side view.

This head is different from the majority of other ones because it is round at the base, but tapered and narrow towards the forehead, although the top of the head could have been partly modeled into a headdress; this example seems to be 3/4 life size. The nose is rendered as in the other heads, the chin is receding, and the eyes are more bulging than in other examples, but not much can be said because all details are weathered. The paint is also badly preserved, and traces of red are visible mostly on the right side of the face.

Accession No.: BM38-10.21.408 (Fig. 4.17; Appendix B Fig. B-13)
Dimensions: 15.5x17.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red paint

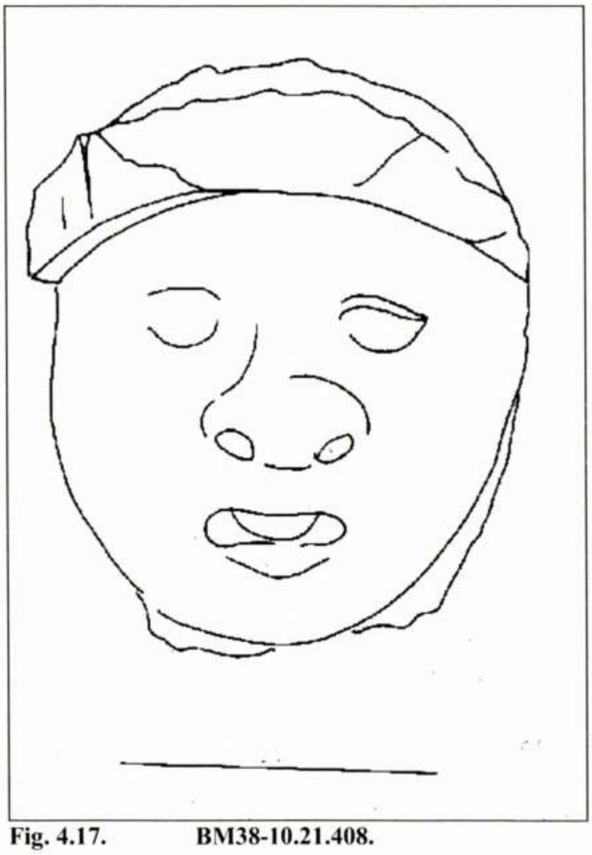


Fig. 4.17. BM38-10.21.408.

Although not as well preserved and not as large, this head is very similar to BM30-1.21.397 (Appendix B, Fig. B-4). Both figures wear a headdress or headband low on the forehead. This one is broken in the center and does not have the three-part band visible in the other, but it can be assumed that a central element might have been fastened on this headdress as well. Red paint is visible all over the face but in blotchy, weathered patches. The eyes are open but no traces of black-painted pupils are visible. The mouth is identical to BM30-10.21.397, but the nose is larger, more like BM39-10.21.406.

Accession No.: BM38-10.21.409 (Fig. 4.18; Appendix B Fig. B-14)
Dimensions: 20x28.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red paint

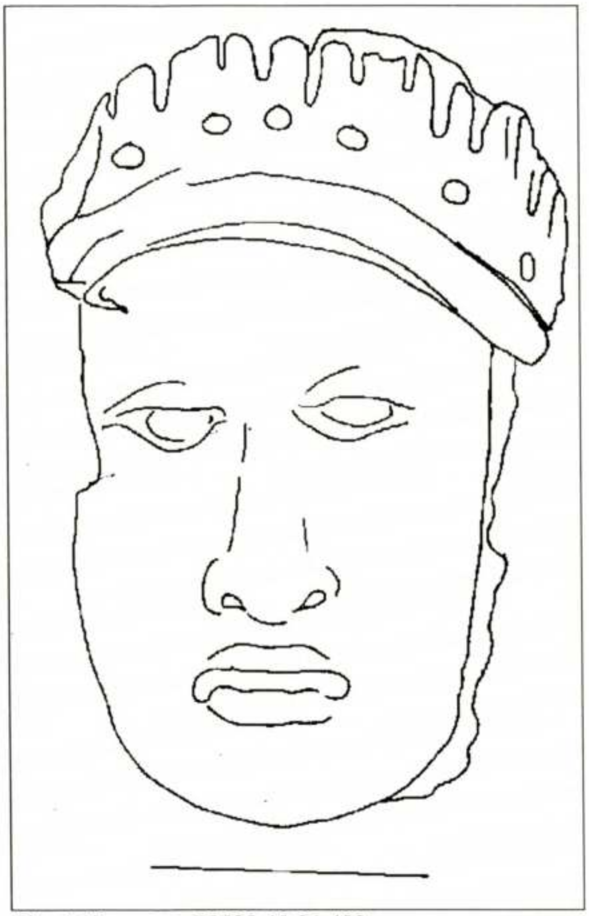


Fig. 4.18. BM38-10.21.409.

This head is slightly larger than the other, and, because of the preserved portion of the headdress, this is also the tallest example in this collection. The head and headdress actually consist of two pieces joined as one at the top of the forehead. Very faint traces of red paint remain, and although no black paint defines the pupils, the eyes are modeled carefully to depict half-lowered eyelids, and the lips are carefully rendered, not parted as in all the other heads. The headdress is a crown-like device with tripartite elements and punctured holes above a narrow band. No paint remains to indicate what colors the headdress was decorated with. Of all the heads found at Louisville this is the one that most closely resembles an example from Seibal in size, rendering of the eyes, and approximate shape of the headdress (Fig. 4.19).

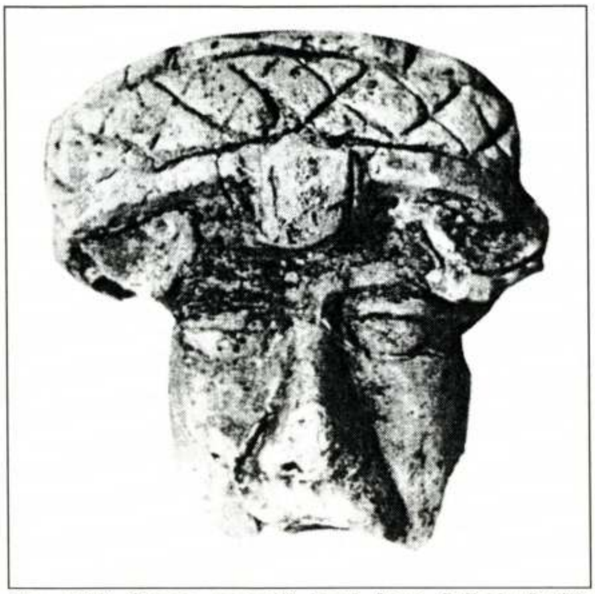


Fig. 4.19. Stucco portrait head from Seibal (Smith 1982: 35, fig. 47D. Copyright 1982 by the President and Fellows of Harvard College).

Accession No.: BM38-10.21.410 (Appendix B Fig. B-15)
Dimensions: 11x15 cm
Provenience: Louisville
Unpublished
Description: Stucco; red paint

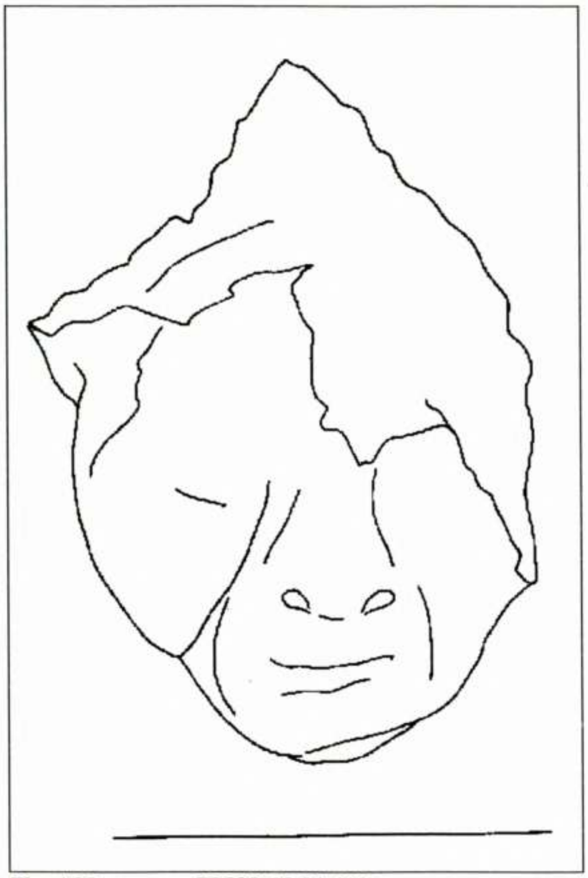


Fig. 4.20. BM38-10.21.410.

This head is also in a very poor state of preservation, and it is very hard to see any details in the facial features, although it is clear that this example depicts a somewhat deformed and oddly shaped head, if it is indeed human. Gann did not illustrate it in his report or his book, but he offered a description that without doubt refers to this particular head: "one is the head of a little old woman with shrunken, wrinkled cheeks and atrophied lower jaw, from which project her two remaining teeth, so true to nature that it cannot but have been drawn from life" (Gann 1939: 256). The weathering is so severe that only the nose is visible, and some traces of red paint, and the upper left portion of the head is broken off; one can neither agree nor disagree with Gann's description, but if this is a human head it is in fact the smallest one in the collection.

Accession No.: BM38-10.21.411 (Fig. 4.21; Appendix B Fig. B-16)
Dimensions: 10.5x13.5 cm
Provenience: Louisville
Unpublished
Description: Stucco

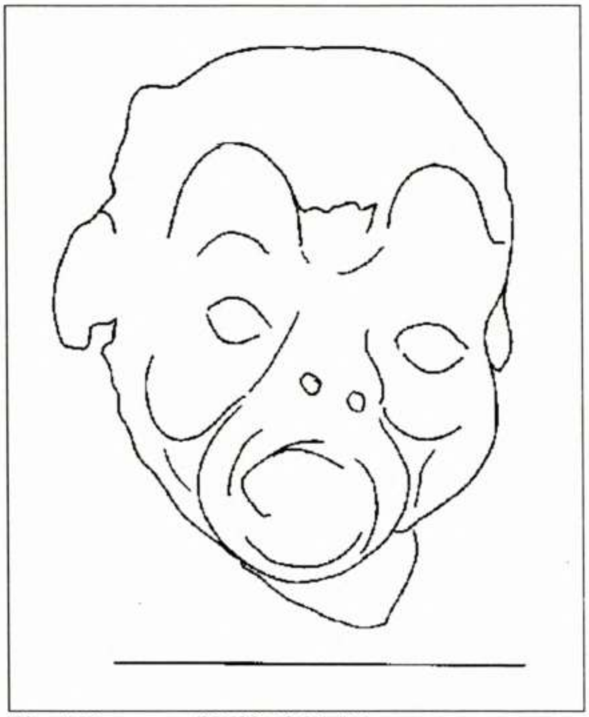


Fig. 4.21. BM38-10.21.411.

Gann did not illustrate this example either but he described the head of a child, and it appears that he was referring to this one, although it is most probably the head of a monkey. Gann described "a crying child, his mouth drawn to one side, and evidently very sorry for himself, as his expression registers acute misery. He wears a tightly fitting netted skull cap with a peak over the forehead" (Gann 1939: 256). Stucco monkey heads are known from Seibal (Willey 1982: 33, 38-39) so it is not entirely implausible that there be animals depicted in the Louisville stuccoes. This head is the smallest in the entire collection, just under the size of the "old woman" BM38-10.2.410.

Accession No.: BM38-10.21.412 (Fig. 4.22; Appendix B Fig. B-17)
Dimensions: 15.5x 15.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, blue, and black paint

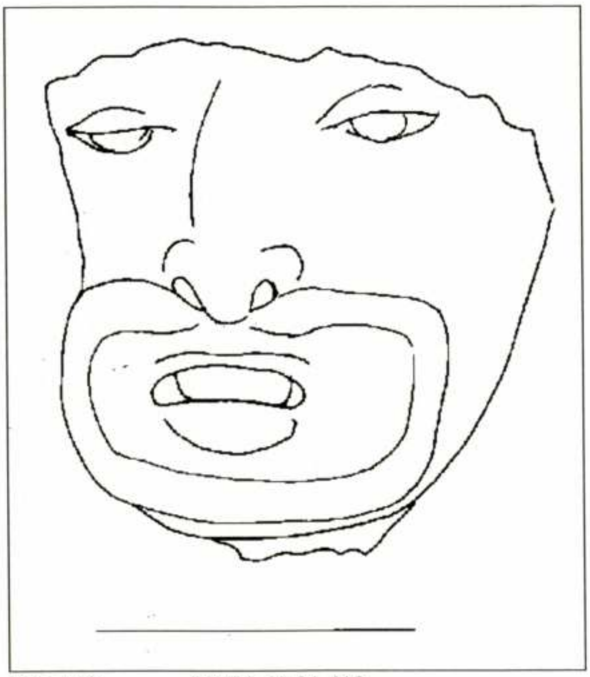


Fig. 4.22. **BM38-10.21.412.**

This head, although incomplete from the eyes up, is quite different in shape from the others. The widest point of the face is at eye level, the cheeks are very flat, and the chin is not receding. The paint is relatively well preserved, and at least three colors are visible. The face is painted red, the eyes, upper lip, and teeth are outlined in black, and a mask around the mouth is painted blue. This is a rather unusual object that shows up in a few other representations, mostly with what seem to be war regalia. The figures on the wall of Pacal's tomb wear square mouthpieces and carry shields and K'awil scepters (see Robertson 1983, fig. 238). Similar accoutrements--a mouth frame, shield, and K'awil scepter--are shown with B'alaj Chan K'awiil, the founder of Dos Pilas, on Stela 17 (see Schele and Miller 1986: 56). An unprovenienced figurine, reminiscent of the Jaina figurines and, according to Schele and Miller, of the same date as to the Dos Pilas stela by stylistic association, wears a similar mouthpiece, carries a shield on one arm, and holds the other in a position that might have carried a scepter (see Schele and Miller 1986: 72, 86). The Louisville head has a mouthpiece with rounded edges, about 1 cm thick and clearly not representing something that would have been painted on the face, but it is unclear of what material this device might have been made. In Pacal's tomb a similar mouthpiece was actually found, and it was made of red painted plaster coating thin pieces of pyrite (Schele and Miller 1986: 76). This Louisville head probably dates to later than the other examples with similar mouthpieces, and although interesting for its rarity, there is not enough evidence to argue that these mouthpieces are part of war regalia and that this head portrays a warrior.

Accession No.: BM38-10.21.413 (Fig. 4.23; Appendix B Fig. B-18)
Dimensions: 32.5x27 cm
Provenience: Louisville, NW corner of building excavated by Gann
Unpublished
Description: Stucco

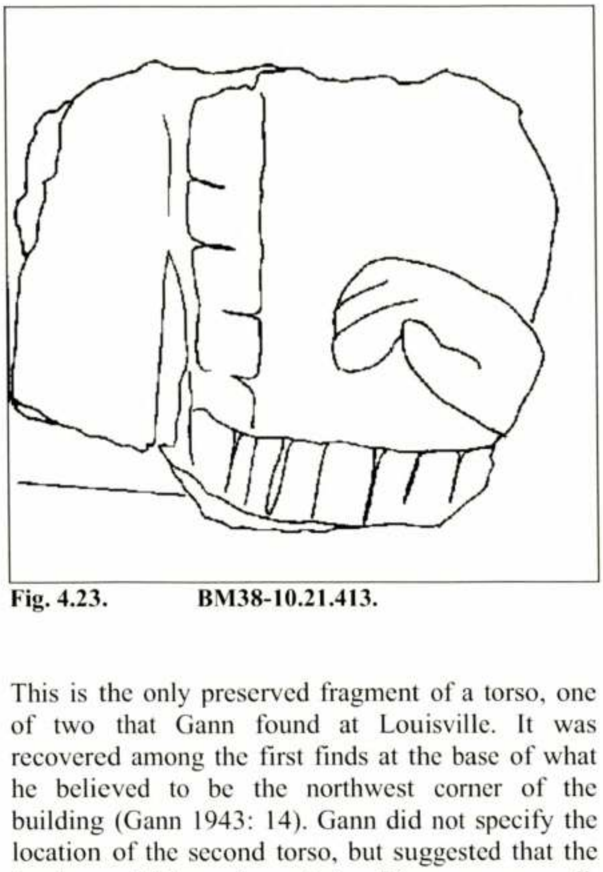


Fig. 4.23. **BM38-10.21.413.**

This is the only preserved fragment of a torso, one of two that Gann found at Louisville. It was recovered among the first finds at the base of what he believed to be the northwest corner of the building (Gann 1943: 14). Gann did not specify the location of the second torso, but suggested that the heads would have decorated a frieze on one wall, and two full figures would have been placed at each end (Gann 1943: 14). The size of this torso indicates that the figure would have been about life size, and is therefore of the same proportions as the majority of the heads. The torso wears a sort of belt and shoulder strap with incised lines, but no color is evident on this piece and not much can be said of the attire. What appears to be a hand, although modeled in a less three-dimensional style than the rest of the torso, rests on the left side of the chest. The perspective may not have been carefully modeled in stucco, and this may indeed be the hand of this figure; alternatively, because of the position of the thumb, it might also be the hand of a putative figure that stood to the left of this one. If that is the case then there may have been more than the two torsos at the building's corners.

Accession No.: BM38-10.21.403 (Fig. 4.24a; Appendix B Fig. B-19a)
Dimensions: 14x14 cm
Provenience: Louisville
Published: Hammond and Runggaldier 2000: 494
Description: Stucco; red, and blue paint

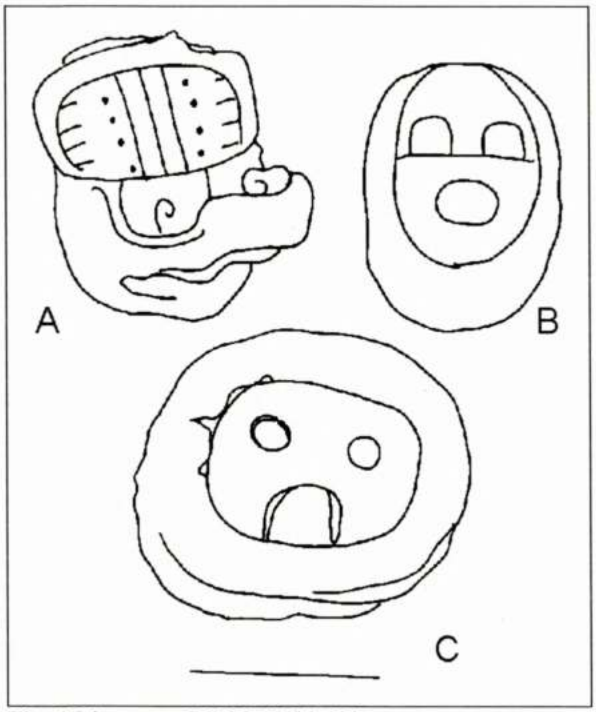


Fig. 4.24a. **BM38-10.21.403.**
Fig. 4.24b. **BM38-10.21.402.**
Fig. 4.24c. **BM38-10.21.394.**

This small fragment is of significant importance because it represents a portion of a glyph and indicates that the frieze may have had a text also modeled in stucco. The glyph is a deity head painted in red and blue layers, with a sign infixed onto its forehead, painted in red and bordered in blue. The sign is either the syllable *ts'i* or the logographic sign for fire, *K'AK*. Because of the head underneath, a sort of Long-nosed god that acts as an animating device (Stuart 2000, lecture notes), it is most likely a logograph, although the complete sign for fire would also need a smoke curl placed above the sign or below the head, which may have broken off (Fig. 4.25).

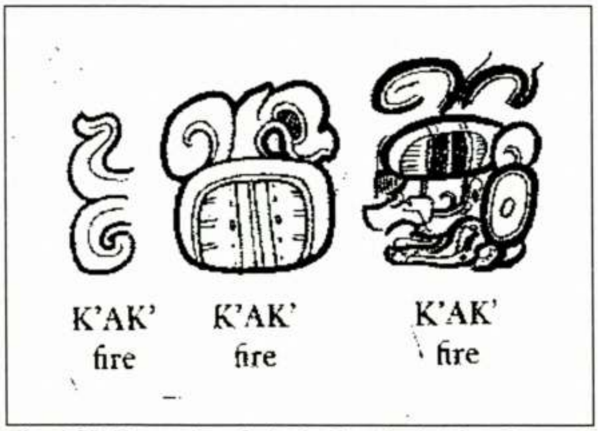


Fig. 4.25. Examples of glyphs for 'fire' (after Coe and Van Stone 2001: 164).

Combined with a sign depicting a rattlesnake tail, that may occur in the stucco fragments at Tulane University and that reads *OCH*, this would form a verbal compound that denotes "fire-entering rites" (Stuart 1998). Fire-entering is a ceremony that is typically recounted in architectural dedication texts such as in Yaxchilan Lintel 56 (Stuart 1998: 385), and that is also found in Yaxchilan Lintel 28, on the occasion of the reopening of the tomb of Bird Jaguar's mother, also known as Lady Ik Skull or Lady Evening Star. It is impossible to know whether this glyph really indicated "fire-entering" because the fragment, although clearly glyphic as opposed to iconographic, is not a complete glyph. As part of a text it may have described the dedication of this building and therefore would have given a date for the stucco frieze and the heads.

Aside from suggesting that the people of Louisville who built the stucco frieze and text were literate as well as knowledgeable of the animated variants of glyphs, this small fragment is also interesting because the orientation of the head is opposite the standard direction of heads in texts. Although not much can be concluded from this, it does however indicate the possibility that Louisville had one of the rare "inverted" texts.

This fragment may also be the one that Gann referred to when he believed to have found two deity heads, one of which was "the Long-Nosed god" (Gann 1939: 256).

Accession No.: BM38-10.21.402 (Fig. 4.24b; Appendix B Fig. B-19b)
Dimensions: 10x13 cm
Provenience: Louisville
Published: Hammond and Runggaldier 2000: 494
Description: Stucco; red, and blue paint

This fragment is part of a glyph or possibly a medallion in one of the figures' headdresses. As a glyph very little can be said about it except that it vaguely resembles either the syllable *u* or the syllable *lo*, depending on its orientation. If turned upside down with respect to the orientation in the illustration it may also resemble a head with a "mirror" infixed in the forehead, which can occur with some deity representations, and it may have been worn as a pectoral or headdress element.

Accession No.: BM38-10.21.394 (Fig. 4.24c; Appendix B Fig. B-19c; see also Fig. 3.4c)
Dimensions: 17x14 cm
Provenience: Louisville
Published: Gann 1939 Plate 254; Hammond and Runggaldier 2000: 494
Description: Stucco

This fragment is clearly an *Ahau* sign, which could have been either glyphic or iconographic. There is reason to believe it was not used as an iconographic element adorning the heads because its size is too large in comparison with these. Although it could conceivably have been a medallion on a headdress, its size is in fact more than double that of the medallion on BM38-10.21.333 (Appendix B, Fig. B-1a). If we assume that it was part of a text, then it could either have been used as a day sign, as the syllable *la* (if inverted), or as the *Ahau* logogram, with an unknown phonetic reading. Again because of its size, compared with the "fire" glyph BM38-10.21.403, which is used as a main sign, this stucco piece also would seem to have been used as a main sign, thus excluding at least its use as a syllable, which would be expected to be half this size. As the day *Ahau* it should be encased in a cartouche with a bottom scroll, which in Classic inscriptions always indicates the day sign; here it is unclear whether the scrolls have broken off.

Gann published this fragment in *Glories of the Maya* claiming that at the time of discovery "the Maya month Ahau, accompanied by a single bar which stands for the number five, was also found" (Gann 1939: 256). The photograph included the bar (Fig. 3.4c), but neither the text nor the photograph make it clear whether the bar was found attached to the *Ahau* or closely fitting the break, or whether it was assembled as such from possibly different contexts. The bar, however, is of a very uncommon shape, too rounded to be a 'five', and is now not part of the British Museum collection. If it really did fit above the day sign it would also be unusual in the sense that most coefficients accompanying day signs are affixed to the left, not the top, of the day sign.

Gann was, however, able to make some conjectures from the co-occurrence of a five and an *Ahau* sign, suggesting that it indicated the date of the stuccoed building to have been the Katun 5 Ahau between the eighth and ninth centuries A.D. (Gann 1936: 5). If the date really was that of the Katun, it would correspond to 10.1.0.0.0 5 Ahau 3 Kayab, which happens to parallel the dedicatory date for Stela 21 and the stuccoed frieze of Structure A-3 at Seibal (Willey 1982: 47, 50, 55). However, Gann's perception, or lucky guess, was not considered significant by Wauchope, who edited the manuscript and completely deleted a paragraph where Gann described his idea for connecting this partial date with the artifacts found in nearby tombs (Gann 1936: 5).

Accession No.: BM38-10.21.415 (Fig. 4.26; Appendix B Fig. B-20)
Dimensions: 16x15 cm
Provenience: Pueblo Nuevo (labeled as Louisville)
Published: Gann 1918: 113; Gann 1926 Plate 242
Description: Stucco; red paint

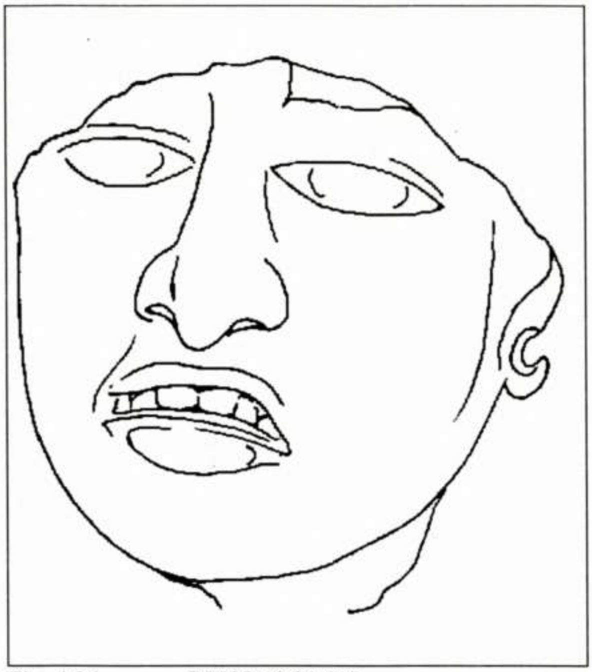


Fig. 4.26. BM38-10.21.415.

Although labeled as one of the heads from Louisville, this example is actually from Pueblo Nuevo, to the east of Louisville, where Gann excavated in the first decade of the 20th century. This particular head was even illustrated in one of his reports (Fig. 4.27) (Gann 1918: 113) and one of his books (Fig. 4.28) (Gann 1926: 242), and it is clear in my opinion that they are the same. In addition, it could not be from Louisville for the simple fact that it was published at least 17 years before the Louisville heads were even known to Gann.

The head has few traces of red paint and is in better condition than those at Louisville. The eyes are long and narrow with sharply modeled edges. The nose is similar to that of BM38-10.21.399 (Fig. B-6), not wide and round like the majority of the Louisville figures. The mouth, although also down-turned, has incised lip contours, and carefully detailed upper teeth. A curl visible at ear level on the left side of the face was included in a drawing of the Pueblo Nuevo head and torso (Fig. 4.27) further suggesting that these are indeed the same head.

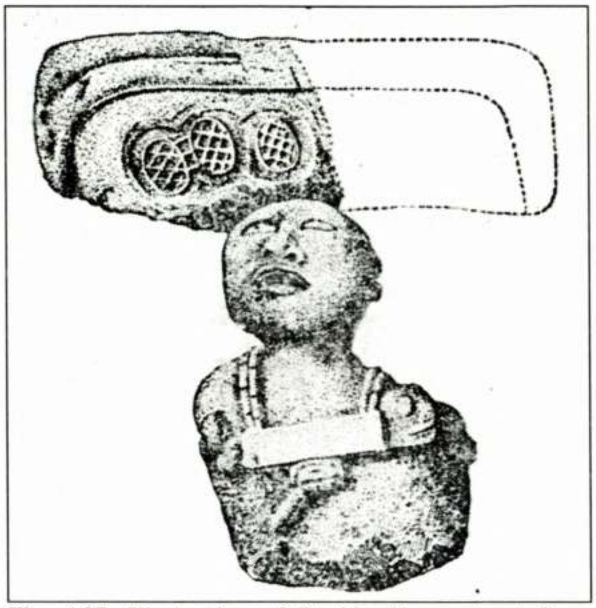


Fig. 4.27. Illustration of Pueblo Nuevo head from Gann's publication (after Gann 1918: 113).

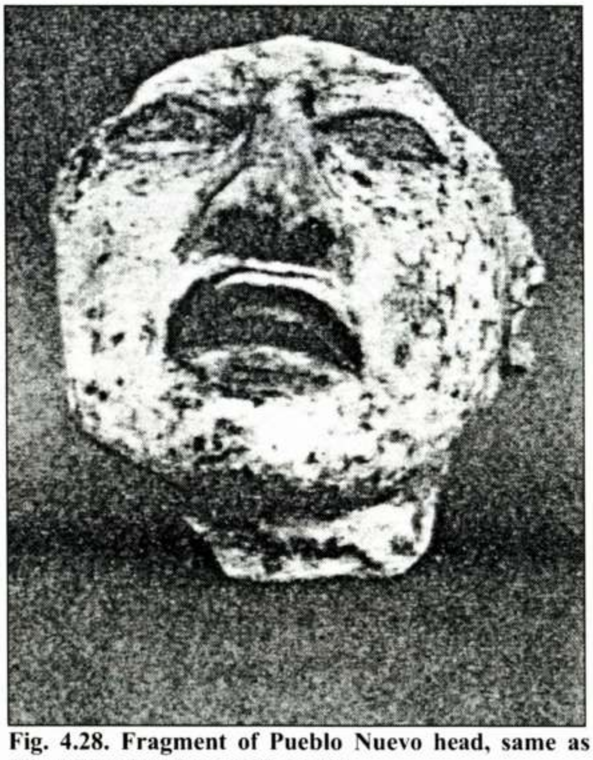


Fig. 4.28. Fragment of Pueblo Nuevo head, same as Fig. 4.27 (after Gann 1926: 242).

A note at the bottom of page 113 in *Maya Indians of Southern Yucatan and Northern British Honduras* reads: "The photographs of the torso and headdress were taken in England and those of the head in British Honduras. Consequently they do not fit together as well as do the originals" (Gann 1918: 113). This explains why the fragment of the head is unaccompanied by the headdress and torso;

however, these are not in the British Museum (the torso BM38-10.21.413 is quite different) and the question of their whereabouts remains unanswered.

Another head is also missing from the British Museum collection. It was published in *Glories of the Maya* (Fig. 3.5d), and it resembles the long and narrow faces of BM38-10.21.407 (Appendix B, Fig. B-12a) and BM38-10.21.409 (Appendix B, Fig. B-14). It also appears to have been about the size of the latter, with a headdress that may have included a flower or vegetation motif.

Although the torso and headdress of the Pueblo Nuevo head are now apparently lost, the British Museum does have two heads that are from Pueblo Nuevo. Altogether there are three heads from this site, which is congruent with what Gann reported (Gann 1918:113).

Accession No.: BM99-206 (Fig. 4.29a and 4.29b; Appendix B Figs. B-21a and B-21b)
Dimensions: 19x23 cm
Provenience: Pueblo Nuevo
Unpublished
Description: Stucco; red, and blue paint

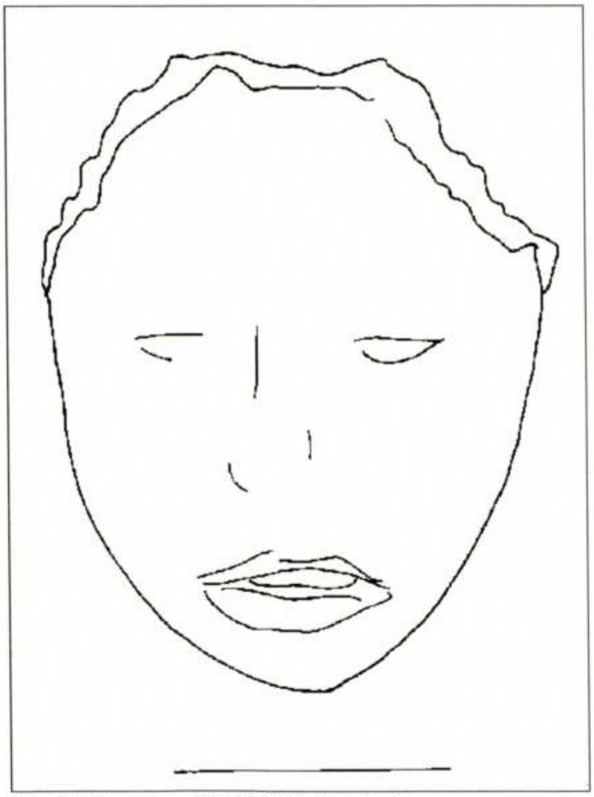


Fig. 4.29a. BM99-206; front view.

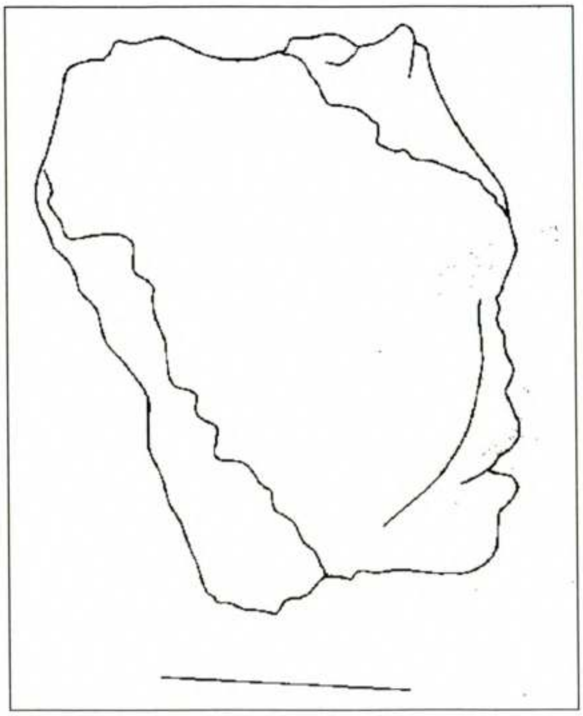


Fig. 4.29b. BM99-206; side view.

This head has delicate features, although the surface finish is severely weathered and the nose is broken off. The eyes are modeled with half-lowered eyelids, and the mouth has down-turned lips. The top of the head and headdress is entirely missing. Traces of red paint remain on the chin and on the right cheek. Here as well as on the forehead some blue markings can be seen, but not enough to detect a particular design.

Accession No.: BM99-207 (Fig. 4.30a and 4.30b; Appendix B Fig. B-22a and B-22b)
Dimensions: 21x23 cm
Provenience: Pueblo Nuevo
Unpublished
Description: Stucco; red, and black paint

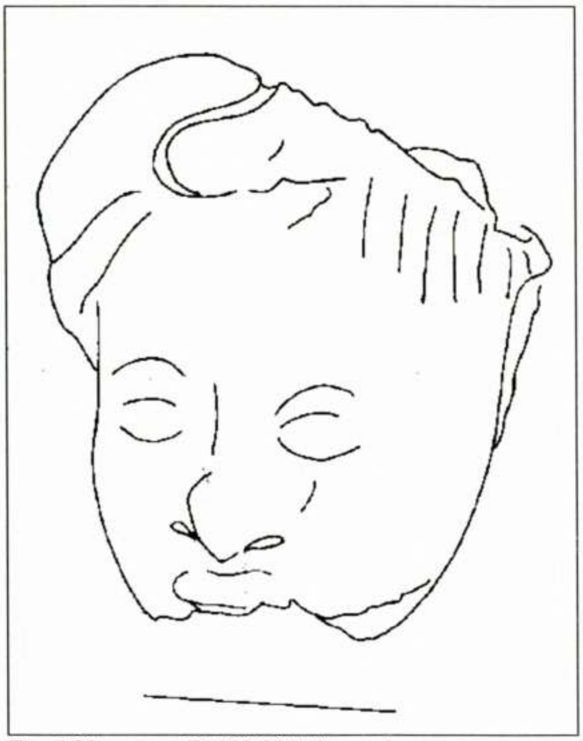


Fig. 4.30a. **BM99-207; front view.**

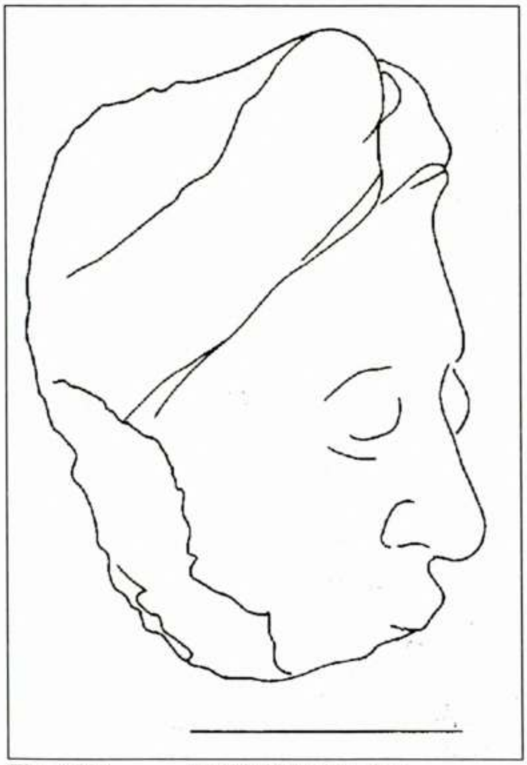


Fig. 4.30b. **BM99-207; side view.**

This head is similar to the previous one in the shape of the face and the eyes, and in the size and proportion of the features. In this one the mouth and chin are broken off, but the nose, long and narrow, is still present. Part of the headdress is also present, modeled in the shape of a cloth-like band around the head and terminating in a knot at the center of the forehead. Some of the hair is rendered by parallel incisions in the stucco above the left eye of the figure, and some traces of black paint are visible. Traces of red paint remain on the right side of the face and portions of the headdress.

At Tulane University

Accession No.: 3789.34 (Fig. 4.31; Appendix B Fig. B-23; see also Fig. 3.3a)
Dimensions (width x height): 16x21 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco; red paint

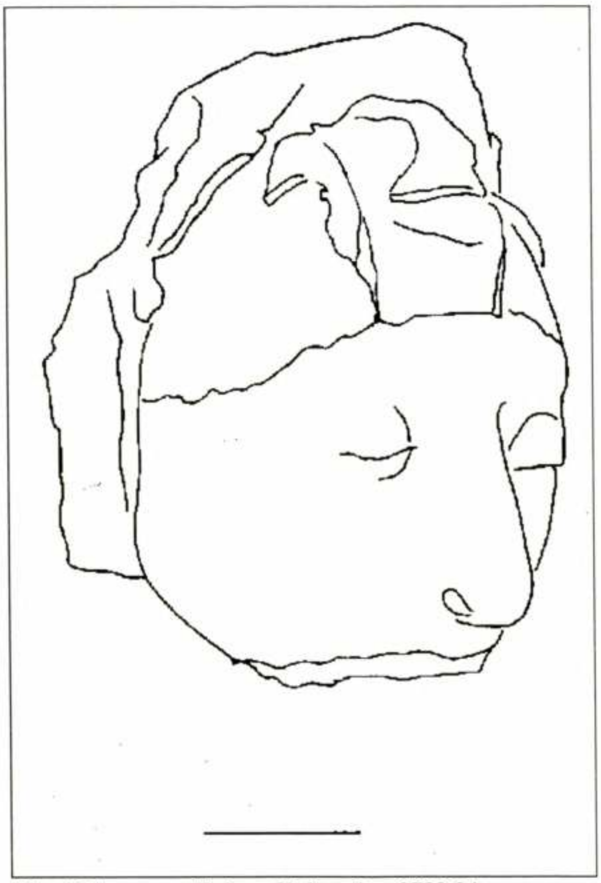


Fig. 4.31. **Tulane University, 3789.34.**

This is one of the three heads in the Tulane University collection. The red paint is almost entirely gone and large portions of the head are broken off. The tip of the nose is missing, as is everything below the upper lip, and most of the hair and headdress fell off the core portion of the head. From the way the stucco adheres to the forehead one can see that the hair and headdress were modeled in stucco sheets at least 1 cm thick, and applied to the modeled head. The eyelids seem to be halfway lowered; the nose is long and narrow. The proportions of the face are approximately life size, and similar to the size of the heads in the British Museum.

Accession No.: 3689.35 (Fig. 4.32; Appendix B Fig. B-24; see also Fig. 3.3b)
Dimensions: 16x16 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco

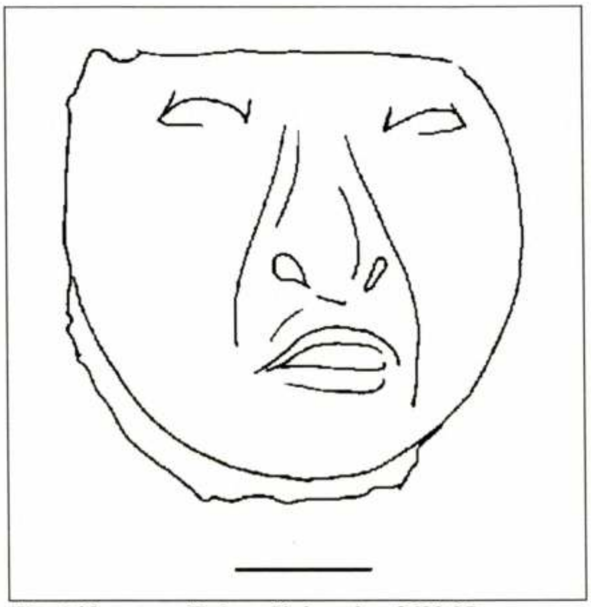


Fig. 4.32. **Tulane University, 3689.35.**

Not much can be said about this head. It was likely painted red like the other heads from Louisville but no traces of paint remain in its present condition. The surface is weathered to the point that the eyes can be seen only as projecting bits of stucco, and the mouth is down-turned with parted lips but no other details can be detected. The head is severed in a straight line above the eyes, and maybe at one time a headdress that was modeled separately had been joined at this point.

Accession No.: 3789.36 (Fig. 4.33; Appendix B Fig. B-25; see also Fig. 3.3c)
Dimensions: 18x20 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco; red paint

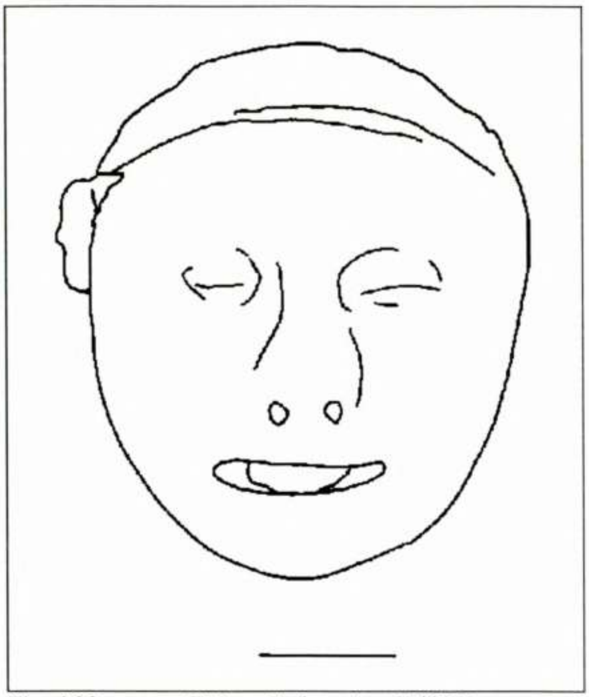


Fig. 4.33. Tulane University, 3789.36.

This head has some traces of red paint on the forehead, but everything else is significantly weathered. A line across the top of the forehead indicates where the hair or headdress was attached. The eyes are marked by a shallow relief in the stucco, and they are more visible in the photograph of the 1943 publication (Fig. 3.3c), indicating perhaps that the head was better preserved 50 years ago and that the stucco has continued to crumble away since. The nose is entirely broken off and only the punctured holes of the nostrils are visible. The lips are parted and the teeth are shown; the mouth is like that of BM38-10.21.397 (Appendix B, Fig. B-4) and BM38-10.21.488 (Appendix B, Fig. B-13).

Accession No.: 41.342 (Appendix B Fig. B-26)
Dimensions: 23x12.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, and black paint

This fragment, illustrated in Appendix B, is one of the most interesting. It consists of two linked elements painted red with a black edge, and possibly a third element that would have attached onto a notch visible in the center of the right side in the illustration. In my opinion this fragment could be either a rattlesnake tail or a depiction of vertebrae in a spine; both motifs might also be linked iconographically. The spine is similarly depicted on Copan Stela A, where a figure holds the spine of a snake (Fig. 4.34a), as well as on a skeletal figure in a Tonina stucco mural (Fig. 4.34b).

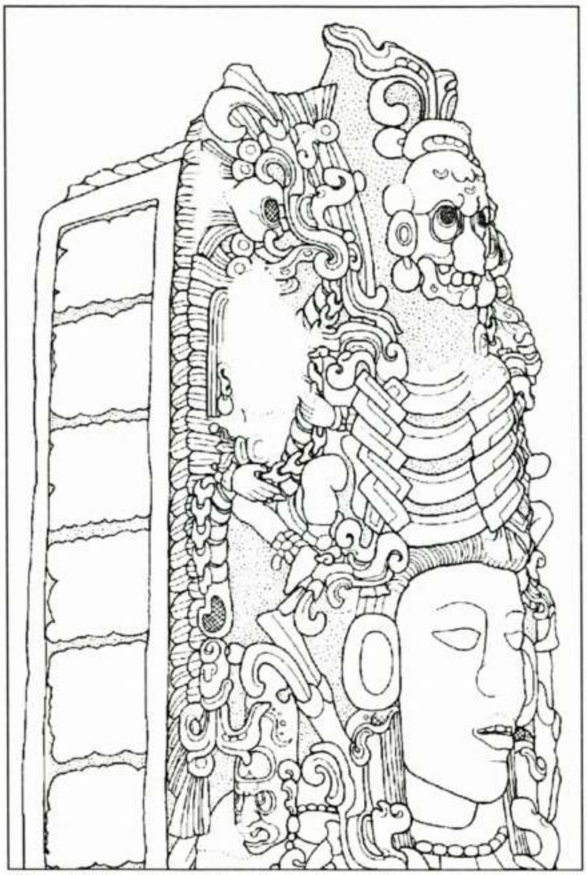


Fig. 4.34a. Example of snake spine and tail; detail from Copan Stela A (after Baudez 1994: 21).

If the Louisville fragment is a rattlesnake tail, then it may also have meaning as a glyph. The verb "to enter", *OCH*, which in Yucatec means "rattlesnake rattles", is used in at least two verbal phrases: *och bih*, or "to enter the road", meaning "to die", and *och k'ak'*, the "fire enters", for dedication rites (Stuart 1998: 388). In the case of "fire-entering" phrases the phonetic reading can be rendered in many ways, one of which could be the "rattles-fire" glyph (Fig. 4.35). There is no indication, unfortunately, that this fragment was part of a larger one that included BM38-10.21.403 (Appendix B, Fig. B-19a), although conceivably the two would fit together in terms of proportions (see Fig. 4.35), and it would be interesting to consider the possibility

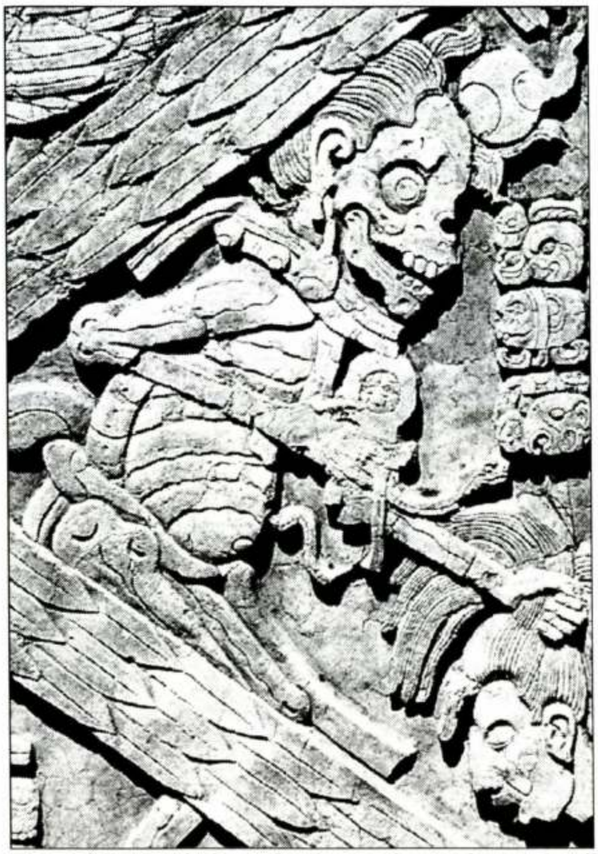


Fig. 4.34b. Depiction of spine and vertebrae; detail from Stucco Panel, Tonina (after Martin and Grube 2000: 185).

that the stucco frieze at Louisville included a text with a dedication phrase and a "fire-entering" rite. Whether or not it fit onto the specific fragment BM38-10.21.403, the rattlesnake tail fragment as a glyph is nevertheless a possible verb.

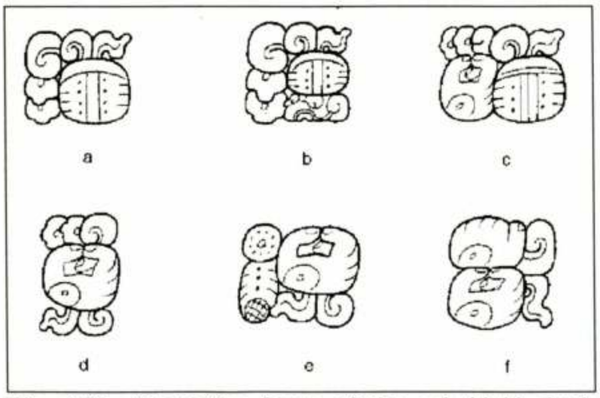


Fig. 4.35. Alternative forms of the *och k'ak'* glyph (Stuart 1998: 387, used with permission of the author).

Accession No.: 39.611 (Appendix B Fig. B-27)
Dimensions: 26x23.5 cm
Provenience: Louisville
Published: Hammond and Runggaldier 2000: 494
Description: Stucco; red, and blue paint

This is the largest of the stucco fragments besides the heads. The color is well preserved; a tripartite element with central holes is painted red, surrounded by a blue area, and framed at the bottom by an incised band of red. The fragment could have been part of a headdress, or it could have been a framing element in the frieze.

Accession No.: 3792.38 (Appendix B Fig. B-28; see also Fig. 3.3e)
Dimensions: 20x12 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco

This fragment seems to include two elements, but not enough of either is present to suggest more than a simple observation. On the right is an element that resembles a link in the possible "rattlesnake tail" suggested for 41.342 (Appendix B, Fig. B-26). On the left side is something that may be a flower, possibly a water lily blossom. There are no indications on whether this fragment was part of a glyph or part of the ornamentation in the frieze and I suppose it could be either. No visible traces of paint remain on the stucco, not even in the grooves, and it may have been painted a cream color, or not painted at all.

Accession No.: 3792.39 (Appendix B Fig. B-29)
Dimensions: 18x19 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, and blue paint

A round element painted red in the center and bordered in blue is infixed onto a larger fragment of stucco, part of which resembles a scroll. This could be part of one of the figures' attire, but there are no indications suggesting anything specific.

Accession No.: 3792.40 (Appendix B Fig. B-30)
Dimensions: 20x19 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, and blue paint

The orientation of this fragment is unknown, so the illustration, like the majority of these fragments, is oriented entirely arbitrarily. In the lower left an element with some traces of blue resembles perhaps jewelry or part of a headdress. The central, somewhat conical element could be part of a limb, but again, too little information is available.

Accession No.: 3792.41 (Appendix B Fig. B-31)
Dimensions: 12.5x7.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, and blue paint

A rectilinear fragment with quite well preserved paint. The red is intense and not as weathered as the blue, which on roughly half of this fragment was painted on top of the red.

Accession No.: 3792.42 (Appendix B Fig. B-32)
Dimensions: 21x14 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, and blue paint

Two bead-like, round and punctured elements are clearly visible and still retain their blue paint. It seems there could have been more, forming a string, perhaps a rendering of jade jewelry. On the left of the beads is a band with parallel, incised lines, painted red. The remaining portion of the fragment is also painted red. There are similar stucco fragments at Dzibilchaltun, in particular one (Fig. 4.36), which is described as a fragment of a "beaded serpent body with a segmented belly" (Coggins 1983: 29).

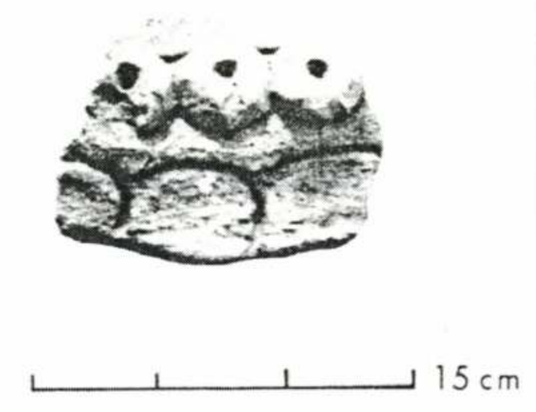


Fig. 4.36. Stucco fragment from Dzibilchaltun (Coggins 1983: 30, courtesy of the author and the M.A.R.I., Tulane University).

Accession No.: 3792.43 (Appendix B Fig. B-33; see also Fig. 3.3i)
Dimensions: 14x13 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco

This curving fragment, which does not have traces of paint, resembles an element of vegetation, perhaps a maize leaf, and is similar to the element in the forehead of BM38-10.21.398 (Appendix B, Fig. B-5). It has a modeled curving edge, and a group of incised circles. It is also reminiscent of the maize depictions in the framing elements of the stucco frieze at Seibal (Fig. 4.37).

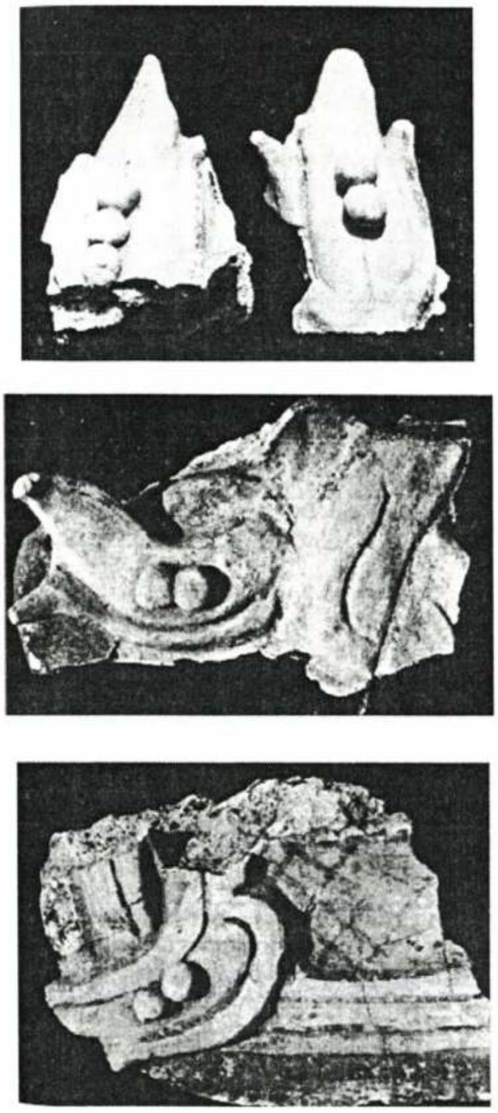


Fig. 4.37. Stucco examples of stylized maize from Str. A-3, Seibal (Smith 1982: 45, figs. 50a-d. Copyright 1982 by the President and Fellows of Harvard College).

Accession No.: 3792.44 (Appendix B Fig. B-34)
Dimensions: 8.5x8 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, and blue paint

This is the smallest stucco fragment from Louisville. It is a circle with a blue edge, and a red center with a hook and five punctured holes. It is quite similar to a number of stucco fragments from Dzibilchaltun (Fig. 4.38), which Coggins suggested might be *Cauac* variants because of their glyph-like appearance (Coggins 1983: 24). A similar element is also shown in a detail of the headdress of one of the stucco relief figures at the entrance of Pacal's tomb at Palenque (see line drawing of the headdress detail in Robertson 1983, fig. 291). A serpent wing has fish nibbling at elements similar to this one and described as "plants with a series of dots around the edges" (Robertson 1983: 82). Nibbling fish are a common occurrence with water lilies, in headdresses and in depictions of the "watery underworld". Perhaps this circular element with dots is an alternate form of the water lily.

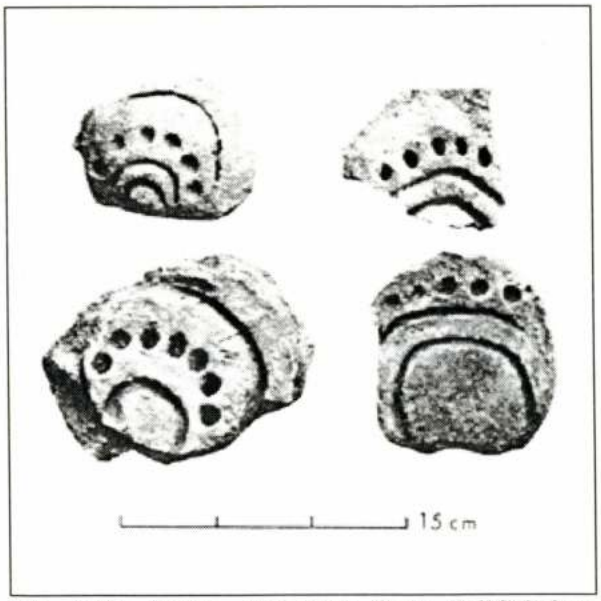


Fig. 4.38. Stucco fragments from Dzibilchaltun (Coggins 1983: 32, courtesy of the author and the M.A.R.I, Tulane University).

Accession No.: 3792.46 (Appendix B Fig. B-35; see also Fig. 3.3f)
Dimensions: 17x12 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco

This fragment is another with no visible traces of paint. It is rather odd in appearance because it has incisions that suggest the rendering of a turtle carapace. It was published in the 1943 report, chosen among the different fragments, perhaps because of this curious appearance. However, the lines of the "incisions" are of apparently random thickness and depth, and it is more likely that they are simply the result of a portion of stucco drying too fast and causing a crackled "design".

Accession No.: 3792.47 (Appendix B Fig. B-36; see also Fig. 3.3h)
Dimensions: 9x6.5 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco

This small fragment has no visible paint traces. It is an oval element incised with three parallel curving lines. The surface is rather rough and probably very weathered; this may have been part of a larger element but in its present condition no conclusions can be drawn as to whether this element is glyphic or iconographic.

Accession No.: 3792.48 (Appendix B Fig. B-37; see also Fig. 3.3d)
Dimensions: 11x10 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco

No paint shows on this fragment either. The shape is rectangular with two lines incised parallel to the long sides. With such a small fragment very little can be said; however, there is some resemblance between this piece and the treatment of hair in stucco in at least one portrait head at Palenque (see photograph of a stucco head buried under Pacal's sarcophagus in Robertson 1983; fig. 233). The hairstyle in that example is fashioned into groups of bangs that form rectangular elements with parallel, incised lines. Although in the Louisville fragment the lines are fewer, there is a possibility that this piece is also a rendering of hair. The size is similar to the elements at Palenque and the proportions would have corresponded with those of some of the heads from Louisville.

Accession No.: 3792.49 (Appendix B Fig. B-38; see also Fig. 3.3g)
Dimensions: 9x7 cm
Provenience: Louisville
Published: Gann 1943: 15
Description: Stucco

Although unidentifiable, this small fragment has a glyph-like appearance. It may be only part of a glyph, possibly something like the tip of the syllable *si* or the logogram *SAK*. It consists of a roughly semicircular element, on the right in the figure, and its trefoil tip on the left, bound together by a band. It could also be part of the iconography, perhaps depicting a knot, part of a headdress or an element of clothing. No paint is visible.

Accession No.: 3792.50 (Appendix B Fig. B-39)
Dimensions: 19x18 cm
Provenience: Louisville
Unpublished
Description: Stucco

This is a puzzling fragment. It is rather large and plain, with the exception of two holes over a centimeter in diameter each. The size is comparable to that of the heads and there is a possibility that it is the back of one of the heads, the face entirely broken off, and the holes having something to do with the way the heads were fastened onto the wall. No paint is visible.

Accession No.: 3792.51 (Appendix B Fig. B-40)
Dimensions: 18.5x15.5 cm
Provenience: Louisville
Unpublished
Description: Stucco; red, and blue paint

This is a large and elaborate fragment, however it is unrecognizable. The paint is an intense red and blue. If turned 90° counterclockwise it vaguely resembles the head of a "long-nosed" deity, similar to the one in the glyph BM38-10.21.403 (Appendix B Fig. B-19a) or a bird, which could have been a headdress. The lower jaw is absent, the upper lip outlined by an incised line that terminates on the right in a down-turned scroll. The place of the eye is broken off, but large enough for a typical god eye, bulbous with a hooked pupil. Around the forehead is a band with a curled front, painted blue. Of course, all of this is pure conjecture and the resemblance may be a simple coincidence of the fracture pattern of the stucco.

Although the collections of the British Museum and Tulane University together don't correspond to the full number of heads that Gann reported finding, the heads in the two collections suggest that probably all the ones that were found were portraits of humans. It is unclear what Gann intended when he reported finding two heads of gods; perhaps the fragment 3792.51 (Appendix B, Fig. B-40) is one of them, but if so he did not publish it. If these two gods are not among the iconographic elements and the glyph-like fragments, then they must have been lost and no generalizations can be made at this point regarding the nature of deities in the stucco frieze at Louisville.

The heads that do survive are remarkably human as opposed to god-like; the elements typical of deities, such as the teeth filed in the shape of the Sun-God *tau* tooth, also a common elite practice, or the plant leaf in the forehead that suggests a connection with the Maize God, are actually minor details that do not preclude the human nature of these modeled heads. More significant for the argument that the Louisville heads portray humans is the predominant use of red paint, which is the color used by the Maya to depict the human body (Robertson 1977: 322).

In the better-preserved examples the careful attention to portraying details is evident; the slightly different sizes and shapes of the faces and facial features do suggest that these are indeed portraits, as Gann had noted in his first report of the discovery (Gann 1936: 4). Some of the differences, for example the round noses with flaring nostrils, and the longer and narrower ones, might also reflect the different styles of more than one craftsman.

The preservation of the paint varies greatly: a few of the heads are rather well preserved, some have essentially no visible traces of paint, and some fall somewhere in between. The varying degrees of preservation may be the result of differential exposure to weathering agents. The heads with the least preserved paint and surface detail may have been on the side of the building most exposed to wind and rain, while the better-preserved ones may have been in a more protected place. This would suggest, as Gann proposed, that he heads had been intentionally detached and buried, perhaps from all sides of the frieze and deposited as a group in one place, along one wall. It is in fact hard to believe that 41 heads could adorn the 10.4 meters of wall exposed by Gann: considering that most headdresses are gone and that the figures likely had earflares as well, they would have had to be stacked vertically in order to fit.

On the other hand, although Gann believed that the heads had been carefully detached so as to cause minimum damage (Gann 1936: 3), in reality they are not as well preserved as one would hope. Many are missing significant portions of the face, only a few have well preserved eyes and mouths, and only three or four have fairly complete headdresses. If any of the figures had jewelry, earflares, feathers and similar items typical of Maya elite attire, none of those fragments are in the collections. They may have been so fragmentary at the time of discovery that they were not saved. However, if the heads are not as well preserved as Gann thought, it may be because they were not carefully detached and buried; rather, the building might have been abandoned long enough for the frieze to weather and crumble from exposure and lack of maintenance, before the structure was filled in and enlarged.

Chapter Five

Field Research of Spring 2000 and 2002

Principal Investigator: Dr. Norman Hammond
Site Director: Astrid Runggaldier
Mappers: Marc Wolf, Scott Smith
Artists: Sheena Howarth, Candida Lonsdale, Louise Belanger
Personnel: Students of the Boston University Field Study in Archaeology Belize Program, Amir and Vildo Gonzales, Francisco and Benedicto Novelo.

The Louisville field project consisted of producing a map of the visible structures of the site, establishing a comprehensive chronology through test pit excavations and surface collection, and identifying the location of the building containing stucco heads excavated by Thomas Gann in the 1930s.

Marc Wolf and Scott Smith created a map of the visible mounds in an area roughly 2 sq km, located east of the Northern Highway approximately 16 km north of Orange Walk Town.

Contemporaneously with the mapping, six excavation operations were carried out in January and February 2000, while surface collection was conducted also in conjunction with the final stages of the mapping portion of the project in the month of March 2000. In 2002, three weeks of fieldwork concentrated on refining the construction phases of the building identified as the one excavated by Gann, and further salvage work and documentation were carried out at a pyramid that underwent massive destruction between the last and the previous field seasons.

Operations L01 through L06 were located on structures numbered according to Wolf's and Smith's mapping sequence. L01, located on Str.1, L02 and L03, located on Str. 91, and L04 located on Str. 7 were test pits excavated in order to obtain a chronology of the site through the stratigraphy of the mounds. Trench L05, located on Str. 12, identified this structure as "Gann's building". Operation L06, located on Str.18, although the last in numerical sequence, was the first operation carried out by the project. This operation was reassigned number L06 at the end of the first season because it was technically not an archaeological trench, but a cleaning of looters' digging and bulldozing, which proved useful in contributing information to the chronology of the site and construction techniques used at Louisville.

In 2002 operation L07 identified a large Preclassic midden in the process of cleaning and recording the sections of a looters' trench. Operation L08 tested the possible existence of a *sacbe* (causeway) connecting the two main pyramids, and running roughly E-W.

Fieldwork Methodology

The aims of the project were threefold: to document the settlement, to salvage the existing evidence of occupation, and to recontextualize the finds of earlier excavators. A record of the site was made by producing the first map of Louisville; test pits and surface collection were employed in building a description and chronology of the site before it is further destroyed; and excavation was carried out to provide the context for the stucco heads that had been lost to Gann's less than careful recording methods.

Although small, the site of Louisville is an important part of the regional landscape and a record of its existence and extent is a useful contribution in the larger picture of northern Belize Maya sites, their locations, spheres of interaction, and lengths of occupation. The existence of the site of Louisville is known in the area, but no site plan existed until 2000 and Gann never published any sketch maps. Documentation of the extent of the site was carried out by mapping all visible mounds and mound clusters. Because of the sugar cane crops that cover most of the site, mapping was in some ways restricted to the accessible areas, where the cane was not too tall to impede topographic readings. The agricultural regimen has already affected the size and distribution of mounds because many have been lowered or leveled to the ground by local farmers in an effort to make plowing less laborious. Demolition has also been occurring because local residents quarry the limestone blocks and rubble in ancient mounds for building materials and road fill. This has been occurring for a long time, and has been reported by Gann as well, who was informed of finds at Louisville because of such road building activities (Gann 1939: 253). Documenting the site plan was necessary and urgent because the demolitions had become more intense in recent years, and by 2000 one of the two pyramids had been leveled to the ground (Fig. 5.1), and half of the other had been removed with a bulldozer (Fig. 5.2).

Because of the activities threatening the site, the Archaeological Commissioner of Belize, Dr. Allan Moore, regarded Louisville as needing emergency

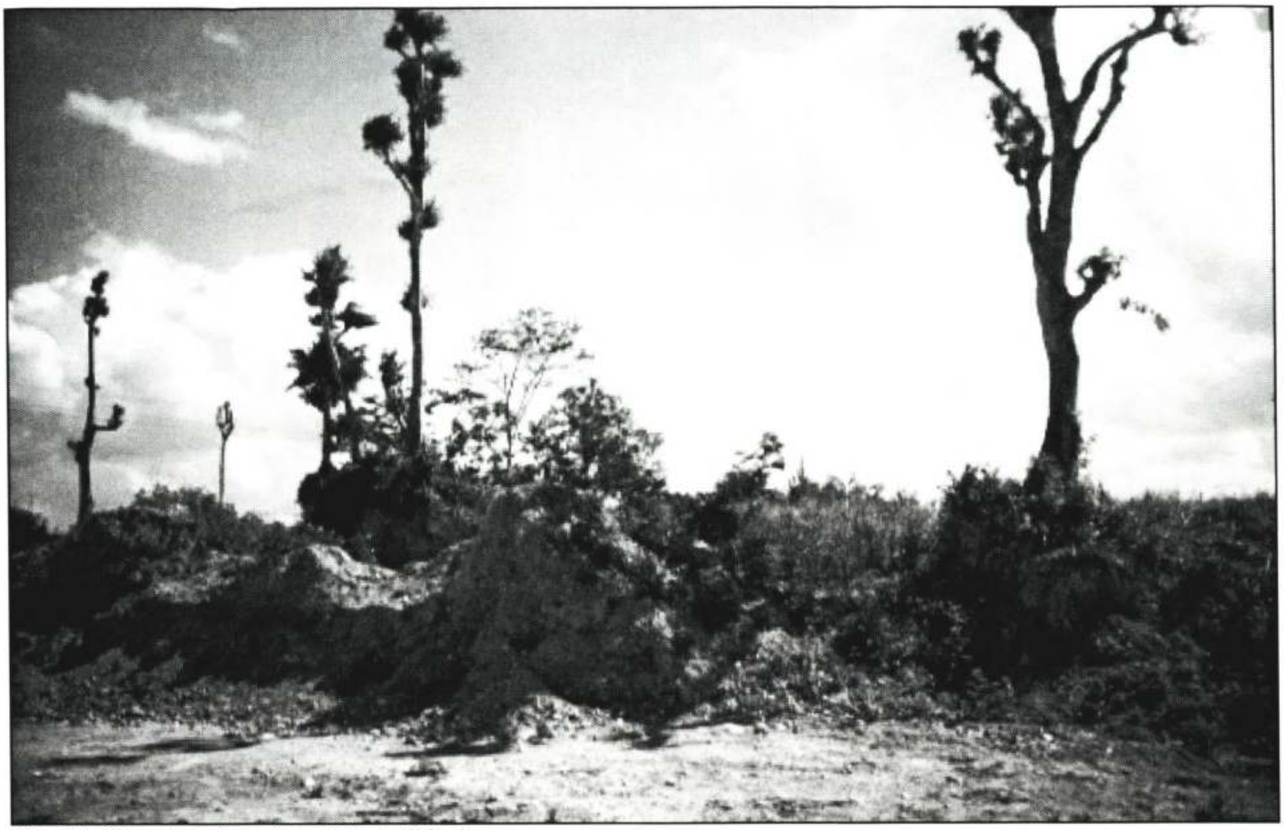


Fig. 5.1. Structure 1 destroyed by bulldozing.

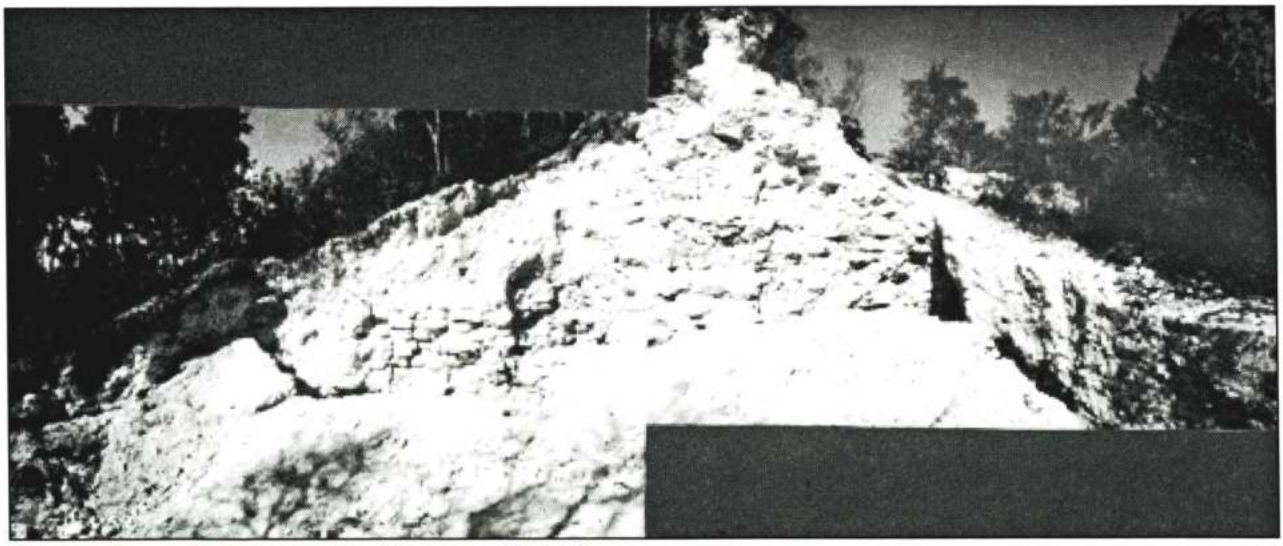


Fig. 5.2. Composite photograph of Structure 18 partly destroyed by bulldozing.

recording, and the project took place during Boston University's Field Study Program to minimize delays that could have cost the loss of further information. As a salvage project, fieldwork at Louisville had to be carried out in a relatively short time, with test excavations that exposed as much of the settlement chronology as possible and were widespread enough to cover most areas of the site, in an effort rapidly to sample different locations and conditions at the site. Test pit locations were chosen in areas affected by unauthorized digging, as well as in areas that showed no disturbance, in the site core, and further away from both large pyramids. In order to establish a complete sequence in the short time available, 1.5 m^2 test pits were excavated, instead of the more traditional 2 m^2, to gain in the minimum amount of time as much information as possible from the stratigraphy in the sections.

In an effort to complete the picture provided by the excavations, surface collection was carried out in areas that could not be excavated. Initial collections and survey contributed to the choice of location for test pits. At the end of the excavations and mapping a further 40 mounds were surveyed in particular to locate areas of early settlement, or evidence of Postclassic occupation.

As part of the intention of salvaging information from Louisville before more of the site disappears to modern activities, we considered it important to establish as far as it was possible where the excavations directed by Gann had taken place. Re-excavating the same areas would provide information that had not been recorded in the 1930s, and give back the temporal and cultural context to the modeled stucco heads and the painted fragments, which would otherwise continue to lie unrecognized in museum storage rooms.

SITE PLAN

The map of Louisville (Fig. 5.3) was produced by Marc Wolf from field survey with a Sokkia SET 500 EDM (Electronic Distance Measure) in an area roughly 1 km E-W and 1.5 km N-S. An arbitrary datum was selected as 6000.00 m north, 6000.00 m east, and 20.00 m in elevation, and from that both modern and ancient features were plotted, and elevations were calculated at the nodes of a 50-meter grid. The datum corresponds in the UTM (Universal Trans Mercator) system to 16 Q 0340704 UTM 2025553, or 18°19' N and 88°30' W (Wolf, Smith, and Hammond 2000: 2). The data was then used to plot the site plan with ESRI's ARCView software. The map includes all visible mounds, as well as primary and secondary platforms, *chultunes*, quarried limestone outcrops, and modern features such as unpaved cane field roads and telephone lines. The total sum of plotted structures, just over a hundred, is probably not a complete record of all existing mounds. Visibility is dependent on the growth stage of the sugarcane crops, so while plants were low and fields were being burned for harvesting additional areas could be surveyed and mounds added to the map, but some remain missing and will need to be added in the future.

The site core is dominated by the two largest structures, pyramids Str. 1 and Str. 18, surrounded by a scatter of single mounds and mound groups. These are most numerous in the east and southeast, scarcer directly south of the western pyramid, and almost absent in the northeast and northwest sections of the surveyed area. This absence may not be an aspect of the original settlement pattern, but rather a function of the proximity of the Northern Highway and the modern town of Louisville. Clearing for agriculture and construction of contemporary houses is likely to have affected these areas of the site the most, while further away fields in the direction of the Jones and Nicholson swamp area are probably less disturbed.

The core itself may be separated into two groups, about 450 m apart, along the W-E axis of the site (Fig. 5.4). The western group was once dominated by Structure 1, the "western pyramid", now almost completely bulldozed and reconstructed as having a 6 m^2 upper platform (Wolf, Smith, and Hammond 2000: 3). It may have faced Structures 12 and 13, the location of Gann's excavations, to the northeast. Structures 7 and 8 are also part of the western group and were likely investigated by Gann. To the south and the southeast are more structures that belong to the western group and possibly faced towards the West Plaza, defined by Structure 1, Structures 12 and 13, and Structures 7 and 8.

The eastern group is incomplete on the map due to thick cane fields, but Structures 18 and 25 were accessible and have been investigated. Structure 18, the "eastern pyramid" is currently the highest mound at Louisville, standing 17 m in height, and, given the evidence of destruction and erosion of the upper part of the mound, it was probably higher at one time. The two structures, along with other smaller ones line the eastern side of the large East Plaza, and probably faced west, towards Structure 1.

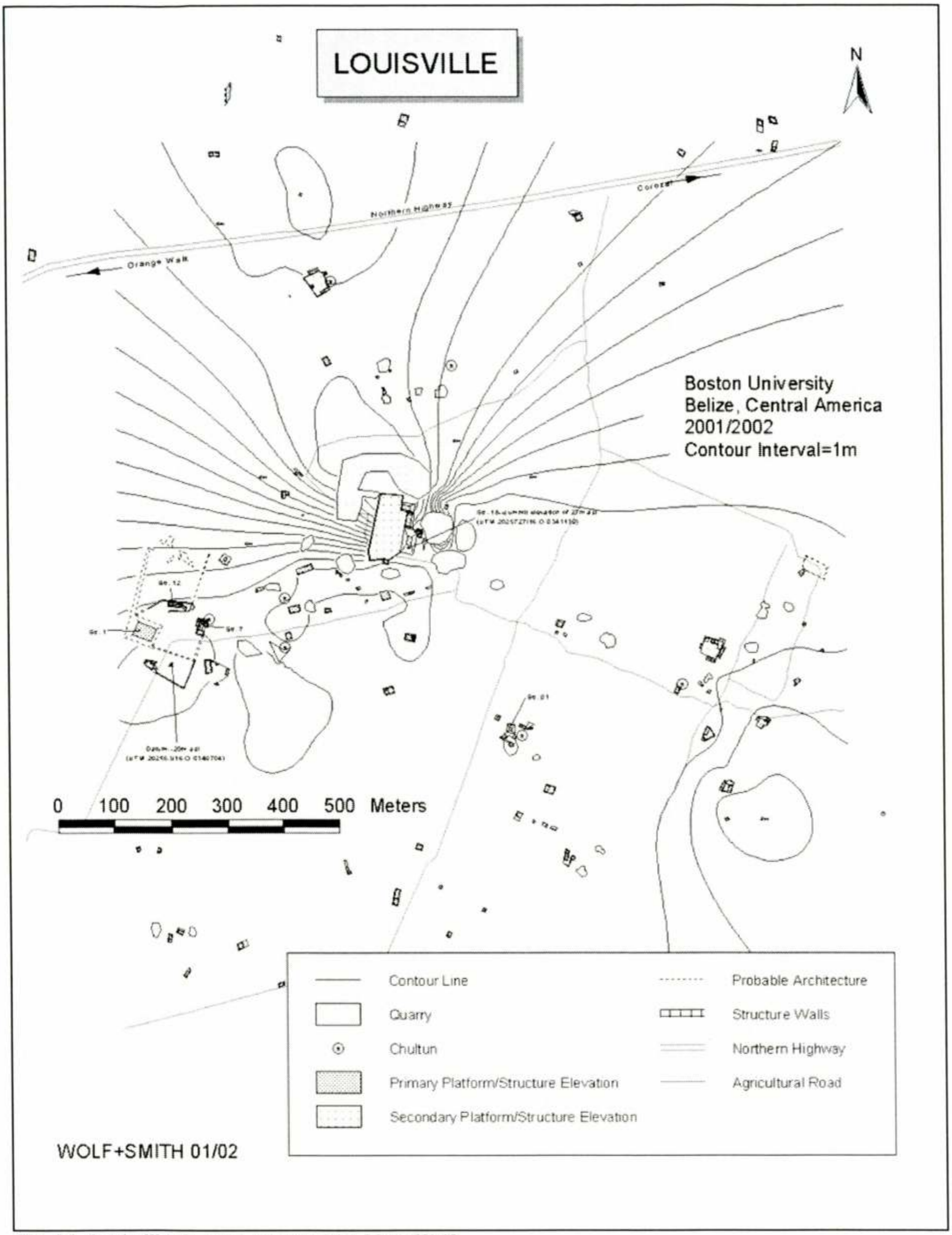


Fig. 5.3. Louisville site map, surveyed by Marc Wolf and Scott Smith, drawn by M. Wolf.

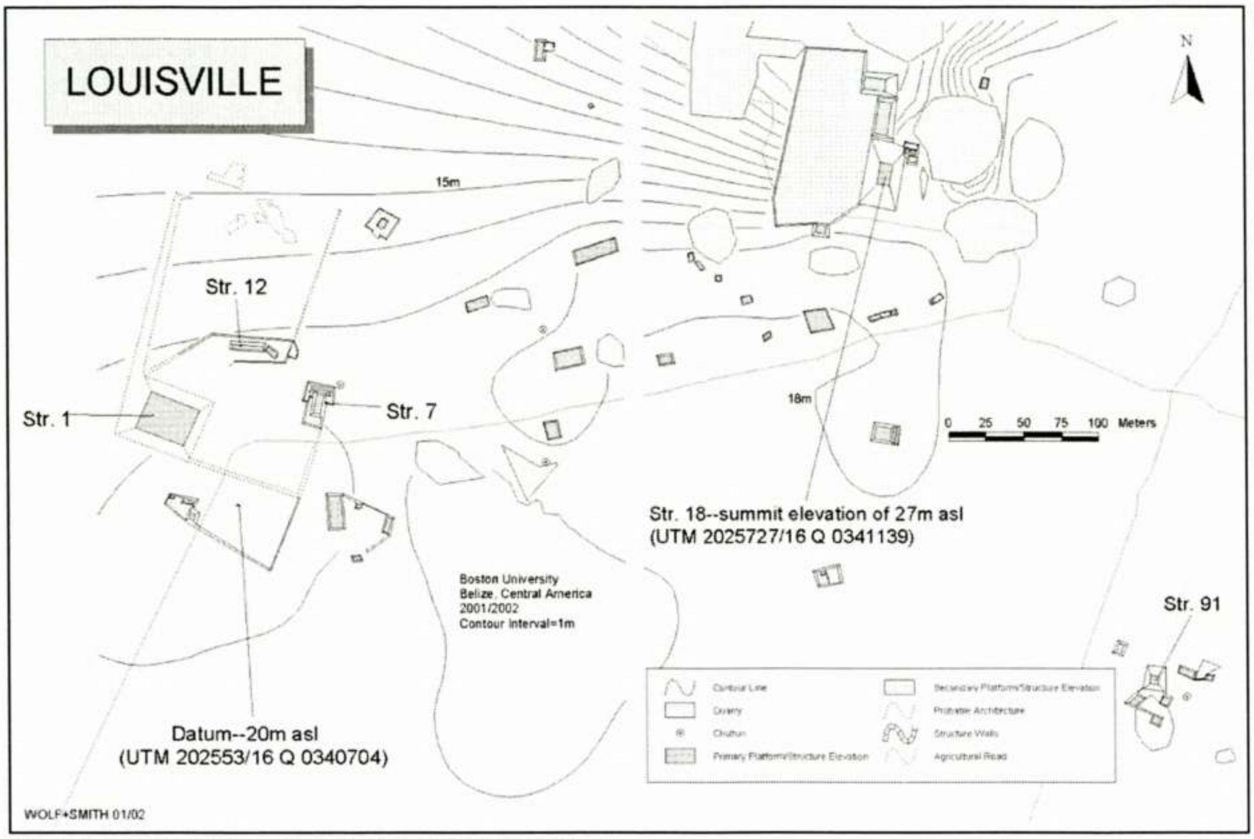


Fig. 5.4. Louisville site core with two main pyramids, Structure 1 and Structure 18; map by Marc Wolf.

There are few structures between the western and eastern groups of the core, and no constructed *sacbe* could be conclusively identified that might have connected the two groups. In 2000 unharvested cane obscured the area where a postulated *sacbe* would have been, but in 2002 test operation L08 encountered rubble construction on top of a shallow ridge that appears to run E-W, so that the existence of a *sacbe*, although not certain, cannot be discounted.

Smaller groups exist around the core defined by the two pyramids. The Triad Group is located roughly 500 m to the east of Structure 18, arranged around a plaza open on the west side so as to face the eastern pyramid. The courtyard group of Structures 90, 91, and 92 reaches 5 m in height and has a well-preserved chultun.

Other mounds include the Chultun Group, named for the large chultun beneath Structure 82, the Tomb Group (Structure 110), a looted rectangular stone-lined tomb with a limestone lid, and Structure 100, located across the Northern Highway, which is at the base of the modern town church.

SURFACE COLLECTIONS

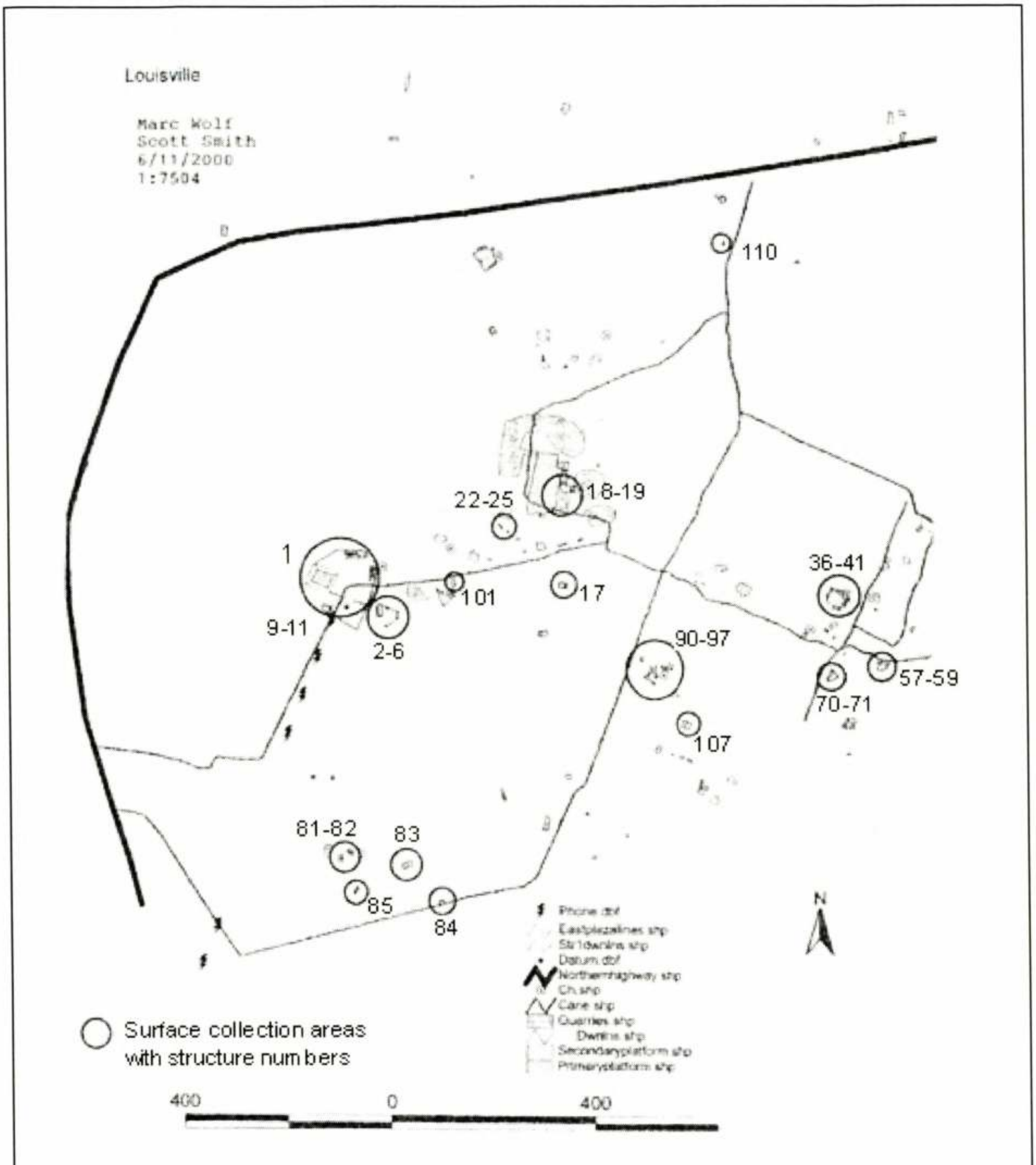


Fig. 5.5. Map of areas of surface collection.

Collection of surface scatters of ceramics and other artifacts was conducted in 2000 at various locations at the site so as to gather information on the chronological span of occupation from the most widespread groups of mounds. Figure 5.5 shows with circles the areas selected for collection; all of these were located in recently plowed and planted cane fields, or on looted and bulldozed mounds where vegetation did not obscure the visibility of artifacts. The area north of the western pyramid was not sampled nor mapped because the ripe cane in those fields greatly impaired visibility.

Collections were carried out both on-mound and off-mound at the selected groups, partly because plowing activities have dragged concentrations of artifacts further away from the tops of mounds, and partly because of invisible activity areas in inter-platform space, as defined for surface collection methodologies at Sayil (Killion et al 1989: 280, 289; Smyth, Dore, and Dunning 1995: 322). Surveyed mounds and mound groups at Louisville total about 40, or a coverage of roughly 35% of all mapped mounds.

The conditions of collected sherds were often too weathered to allow identification. For the purposes of identifying the chronological span of occupation at Louisville, we did not systematically pick up all visible material, but focused the collection strategy on sherds with diagnostic forms or surface treatments. The majority of collected materials date to the Late and Terminal Classic, but there are some notable exceptions (Table 5.1), a selection of which are illustrated using standard conventions (Fig. 5.6).

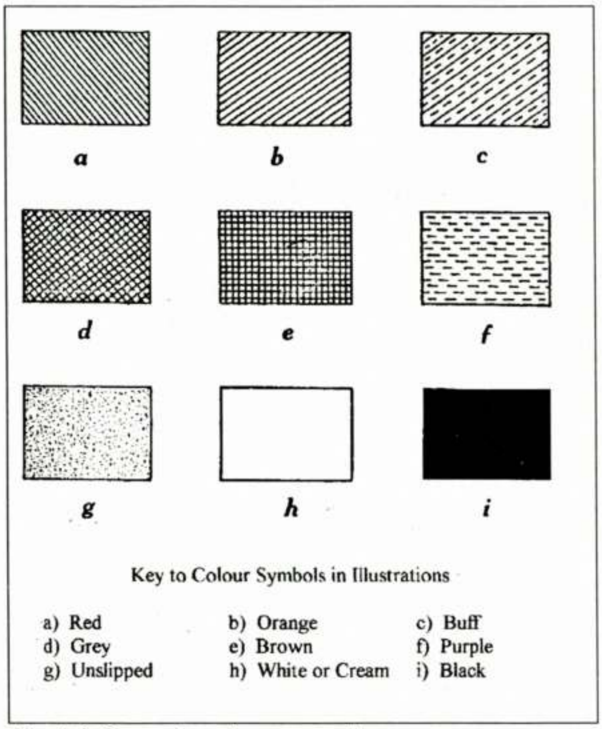


Fig. 5.6. Ceramics color conventions.

The earliest materials come from Str. 1, where most of the ceramics are Middle and Late Preclassic, but there is at least one sherd of Patchchacan Pattern-burnished (Fig. 5.7) that is unquestionably of the Swasey Complex (Kosakowsky 1987: 14-15), redefined to belong to the terminal Early Preclassic (Andrews V and Hammond 1990: 572). Pattern-burnished ceramics are rare at Lowland Maya sites in general, and, where they occur, it is only in small quantities restricted to the early phases of the Preclassic. Louisville has the same type of mica-rich pattern-burnished ceramics as Cuello and Loltun Cave, whose rare examples have been interpreted as items of non-local manufacture probably from the Ulúa valley in Honduras, where mica is a naturally-occurring inclusion in pattern-burnished types that typically date to the Early Preclassic (Joyce and Henderson 2001: 15-17). Clark and Cheetham believe there is solid evidence in the ceramics of Belize Valley sites for consumption of foreign goods from very early on, and definitely throughout the Maya Lowlands by 1000 B.C.; burnished types are among those that are clearly not produced locally (Clark and Cheetham n.d.: 26, 62). Although the occurrence of Patchchacan Pattern-Burnished ceramics at Louisville does not necessarily indicate direct contact between this fairly small settlement with sources in the Ulúa valley, it might suggest that it had contact and exchange with nearby sites, such as Cuello, that did maintain trade networks with remote areas.

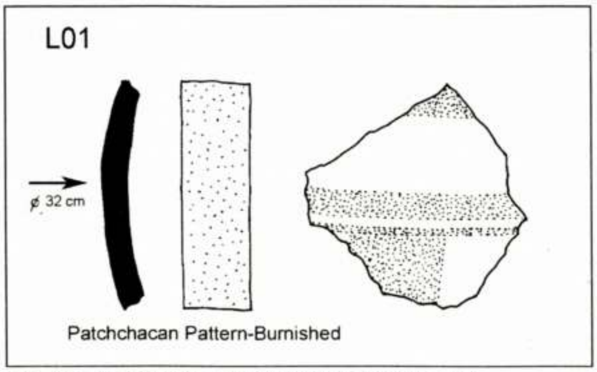


Fig. 5.7. Preclassic pattern-burnished sherd.

The chronological extent of occupation at Louisville, as evidenced from surface collections, spans a period from the Early Preclassic to the Postclassic (Figs. 5.7-5.9), although not all periods are represented uniformly across the site. The area of the site comprising Structure 1 in the west, Structure 18 in the east, and a few interspersed mound groups, is essentially the early core of the site, with the intensity of occupation peaking in the Late Preclassic. A number of Protoclassic and Early Classic ceramics show up in the eastern and southern portions of the site, at Structures 57-59, 70

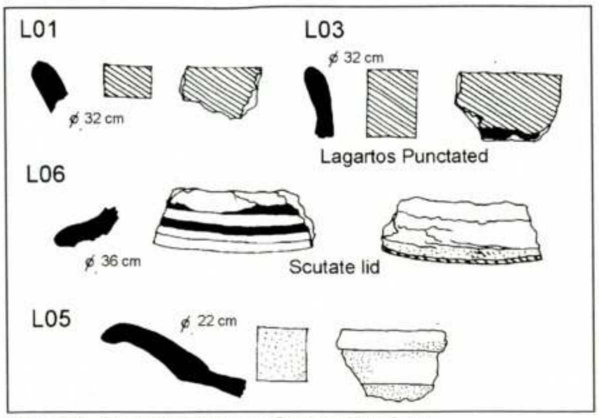


Fig. 5.8. Sherds from surface collection.

and 71, and 82-85. Early Classic sherds are generally absent in the site core.

Late occupation appears to extend to the entire mapped site, with Late/Terminal Classic sherds occurring in the site core at Str. 12, just north of Str. 1, and less frequently in the eastern part of the site core, at Str. 18 and surrounding mounds.

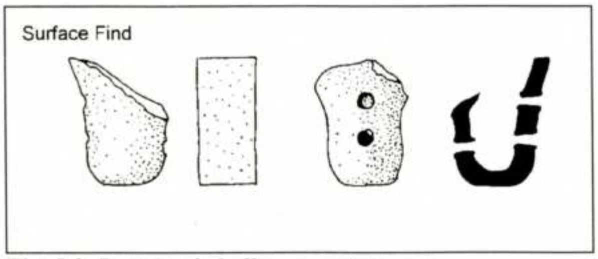


Fig. 5.9. Postclassic hollow support.

A single sherd (Fig. 5.9) could be identified as Postclassic, although some of the indeterminate unslipped ceramics might also date to this late period. The identifiable one, a hollow vented foot, is most closely comparable to the supports for Tulum Complex bowls (see profiles in Sanders 1960: 240, fig. 4a), which typically have two vents on the outer side and one on the inner side. Tulum Complex wares are known to extend to Belize as far as Santa Rita but are lacking at San Jose and Benque Viejo (Sanders 1960: 235); at least one example is present at Louisville. They have also been reported from further south, at Altun Ha (Pendergast 1967: 315-216, figure 1). Other similar support forms occur at Lamanai, where they date to the Late Postclassic, and are related in form but not surface treatment to the Tulum "sag-bottom" bowls with similar hollow vented feet (Graham 1987: 88). Lamanai examples date to A.D. 1400, and similar "Tulum-related" ceramics have been noted at other sites in Belize, but never in securely datable contexts (Graham 1987: 90), so the Louisville foot cannot be identified more precisely than generally Postclassic, and related to Tulum forms.

Given the very early possible connections with ceramics imported from distant regions to the south, perhaps as far as the Ulúa valley, the Protoclassic and Early Classic sherds typical of the Petén tradition, and the possible northern influences in the Postclassic, it appears that Louisville, located at the boundary of the cultural traditions of the northern and central Maya Lowlands, shifts affiliations from an early southern sphere of influence to a later, northern one, as occurs at other Belizean sites, such as Nohmul (Hammond et al. 1988: 12). This might prove to be the case also with traits in architectural style and stucco ornamentation, addressed in the next chapter, as it appears that the stucco heads might be part of a northern tradition as well.

Table 5.1. Classification and notes on ceramics and finds from surface collections.

Structure No.	**Pottery**	**Sherd Notes**	**Small Finds**
Str. 1	0A; 0B; 1; 2; 4 (possibly 5)	Patchchacan Pattern-burnished*, Consejo Red (Swasey); Pettville Red-and-cream (Bladen)	
Str. 2-6	Indeterminate 4/5*		
Str. 9-11	5		Colha chert biface
Str. 17	2; 3; indeterminate 4/5	Sapote Striated (Chicanel/Protoclassic)	
Str. 18	2; 4; 5	Sierra Red (Chicanel); Late/Terminal Preclassic black slipped; Early Classic scutate lid*; Late Classic polychromes	
Str. 19	Indeterminate		
Str. 25	5		
Str. 36-40 (Triad Group)	5	Late Classic polychromes; Late/Terminal Classic Tepeu II, III rims	
Str. 42-47	2; 5	Lagartos Punctated (Chicanel); Late/Terminal Classic	
Str. 48-49	5	Late/Terminal Classic	
Str. 57-58	2; 4; 5	Early Classic basal flanges; Late/Terminal Classic	
Str. 70-71	3; 4; 5	Protoclassic basal "z" angle	
Str. 83	2; 3; 5	Protoclassic basal "z" angle; Late/Terminal Classic	
Str. 82; 84	1; 2; 4 (?); 5	Joventud Red (Mamom); Sierra Red (Chicanel); possible Early Classic	
Str. 85	2; 4	Preclassic flange; Tepeu I (Early Classic)	*Strombus* shell
Str. 101	Indeterminate 4/5		Obsidian blade; net weight; greenstone celt; metate
Str. 107	2; 3; 5	Sapote Striated (Chicanel/Protoclassic)	One-handed mano or plaster polisher
Str. 110 (tomb)	5		
Indeterminate	6	hollow vented foot*	

0A= Early Preclassic, Swasey
0B= Early Middle Preclassic, Bladen
1= Middle Preclassic, Lopez Mamom
2= Late Preclassic, Cocos Chicanel
3= Protoclassic (Late Preclassic/Early Classic) Floral Park
4= Early Classic
5= Late Classic
6= Postclassic
*= drawn sherds

TESTPIT UNITS

Operation L01

Dimensions: 1.5 x 1.5 m
Contexts: 3
L01.01: eroded surface, no topsoil
L01.02: grey clay
L01.03: bedrock

Operation L01 was located on Str. 1, a pyramid no longer existing due to extensive bullzoding activities, presumably carried out by neighboring towns in order to quarry construction materials and limestone dust to pave village roads. Surface collection provided a number of well-preserved Middle Preclassic ceramics as well as earlier material such as one Swasey sherd (Patchchacan Pattern-burnished). The test pit excavation was placed in what Wolf and Smith determined would have been the center of the structure, and it was dug in order to assess whether there were any stratigraphic layers left which could give clues as to the early phases of settlement at the site.

L01.01 was the eroded surface corresponding to recent destruction phase. No real topsoil present, but hard, compacted light grey earth and small limestone rubble. The demolishing work of bulldozers, which local informants reported was done in September 1999, left a number of visible truck tracks and compressed sediments into a thin and very hard to excavate layer. A number of small broken sherds and chert flakes were recovered.

Below that L01.02, a grey clay layer appearing to be paleosol, still yielded cultural material. Since the sherds and chert seemed no different from the ones in the above-lying layer, it is possible that the context of this material was affected by the weight of the trucks which packed the fill together and pushed cultural material further down into ground. Gradually sherds were no longer present and chert flakes became smaller until there was only densely packed greyish clay.

Bedrock, L01.03, was reached only about 35 cm below L01.01. There were some doubts as to whether this was truly bedrock or a possible limestone capping, but intense picking determined that bedrock was indeed reached. The pyramid was therefore built directly above a natural high point in the topography provided by one of the many shallow ridges present at Louisville. Recent demolition of the structure affected stratigraphic material down to the base levels of construction. Dating information was provided most saliently by the ceramics collected on the surface.

Operation L02

Dimensions: 1.5 x 1.5 m
Contexts: 16
L02.01: topsoil and large rocks (plowzone)
L02.02: light soil, small limestone rocks
L02.03: marl, roots, some grey clay (sticky marl)
L02.04: dark soil
L02.05: very dark clayey soil and marl patches
L02.06: dark clayey soil
L02.07: small rubble, friable yellowish marl, no mortar
L02.08: large yellowish rubble stones
L02.09: grey paleosol
L02.10: dark loose soil, small rubble
L02.11: white plaster surface
L02.12: pit cut into surface
L02.13: fill of pit, dark packed soil
L02.14: compact dark brown soil, small limestone inclusions, and clay
L02.15: weathered grey clay (paleosol)
L02.16: bedrock.

This test pit was placed on top of a well-preserved mound, Str. 91, in the middle of a burnt sugar cane field. The excavation yielded numerous sherds in good stratigraphic context, providing a chronological sequence that ranged from Terminal Classic material at the top of the mound to Protoclassic material at the bottom of the excavation (Fig. 5.10).

Below a thick layer of soft topsoil mixed with large limestone rocks was a layer of dark clayey soil and marl lenses, which were divided into four contexts (L02.03, L02.04, L02.05, and L02.06). There were no identifiable surfaces and the marl lenses appeared to be mostly weathered limestone affected by the moisture, roots, and other organic material present in layers L02.01 and L02.02. A paleosol (L02.09) was identified below L02.06 and above L02.07, separating dark clayey soil from yellowish limestone rubble about 80 cm below topsoil, and indicating that this was once an exposed surface. Below the paleosol, contexts L02.07 and L02.08 appeared to be a phase of mound enlargement consisting primarily of loose rubble packed without mortar, with large limestone rocks at the lower level, topped by small limestone rocks. The limestone rubble layers were first identified in the southern half of the test pit and gradually encompassed the extent of the excavation. In the east and west sections it was later possible to see that the paleosol and underlying rubble layers

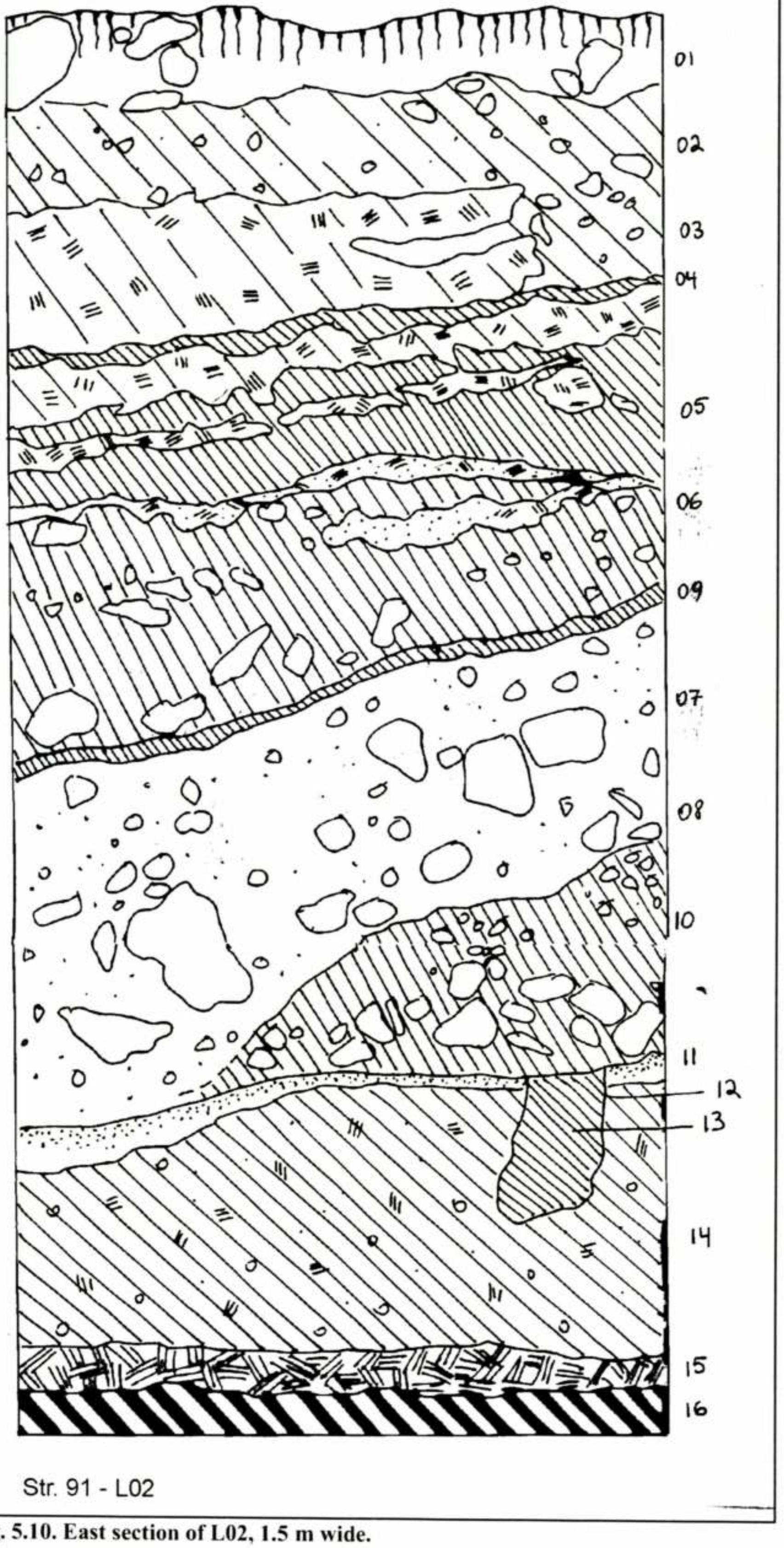


Fig. 5.10. East section of L02, 1.5 m wide.

were downward sloping from south to north, preserving a profile of the mound enlargement phase. The pitch of the slope and depth from topsoil posed some questions as to the relationship between this mound phase and the platform that was visible at the south side of Structure 91. This relationship was tested with a shovel pit in Operation L03.

A mound construction phase was identified in layer L02.10, below L02.08. It differed from the later enlargement phase in the composition of the layer, which was made up of small rubble as well as dark soil packed between the rubble stones. It also contained a significantly larger amount of sherds than any of the above-lying layers. Below this rubble layer a plaster surface was uncovered (L02.11). The layer was composed of white weathered plaster, about 2 cm in thickness, fairly even and only slightly downward sloping from south to north. It lacked the polished surface of a floor. In the surface, at the SE corner of the test pit, a distinct cut was uncovered, but it was not deemed to be a posthole because of its irregular, roughly rectangular shape measuring about 30 x 12 cm. The fill was dark packed soil with a large amount of very small ceramic sherds and a good deal of charcoal.

Below the surface layer of L02.11 was an even layer of dark soil encompassing the entire extent of the test pit. It contained small limestone inclusions and some clay but was mostly a compact dark brown soil, with many large and small sherds, chert, obsidian, and small bone fragments. Directly above what were first identified as large stone slabs was a layer of clay (L02.15) which contained no cultural material, and was easily removed to show that the excavation had reached bedrock, at a depth of 3.2 m from topsoil.

In summary the test pit showed a sequence of four phases. Phase I was a habitation phase which included a plaster surface at the level of the present-day sugar cane field. Phase II saw the construction of the mound identified with layer L02.10. Phase III was the enlargement of the mound up to the level of the paleosol in L02.09. Phase IV further enlarged the mound to its present size with the accumulation of a thick soil and marl layer that was affected by the organic material of the forest growth and the more recent sugar cane cultivation, obscuring any distinct evidence of construction or habitation surfaces.

Operation L03
Dimensions: 50 x 70 cm
Contexts: 4
L03.01: topsoil
L03.02: dark clayey soil
L03.03: partial ceramic vessel
L03.04: vessel fill, dark soil

This operation was a small shovel test pit placed at 7.5 m south of the SW corner of operation L02. Its purpose was to test the relationship between the mound of Str. 91 and the platform visible on its south side. A number of possibilities were considered: the mound could have been constructed after the platform and abutting it, in which case the stratigraphy and cultural materials found in Operation L03 would have been different from those of Operation L02; the mound was built on top of the platform, in which case the contents of the shovel pit would have been the same as those below the paleosol layer L02.09; the mound and the platform were part of a single-phase construction effort, in which case there would have also been a correlation between layers in L02 and L03. We decided to test for similarity of layers, in particular to find the yellowish limestone rubble overlaying the rubble mixed with dark soil that was identified in the mound construction and enlargement phases of Str. 91.

There was thick topsoil and root disturbance due to the fact that L03 was located in an area currently plowed and cultivated with sugar cane. However, below this layer and until the limit of excavation at 80 cm of depth, a fairly uniform layer of dark clayey soil was found, in no way similar to what was found at the same depth in Operation L02. The main find of Operation L03 was a fractured, yet still in situ, partial vessel, from the Late Classic. It contained a fill of dark soil entirely consistent with the matrix L03.02, and in addition a large number of very small and eroded sherds, along with numerous fragments of animal bone, probably rodent (Julie Saul, personal communication). Upon reaching enough depth of excavation to securely establish that the layers in L02 and L03 did not match, Operation L03 was terminated. In conclusion it appears that the mound of Str. 91 and the south-side platform were distinct constructions, and that the platform may have been later than the mound enlargement phase. In a preliminary map Wolf and Smith identified Str. 91 and the platform on its south side as separate mounds, and excavation seems to have confirmed that hypothesis.

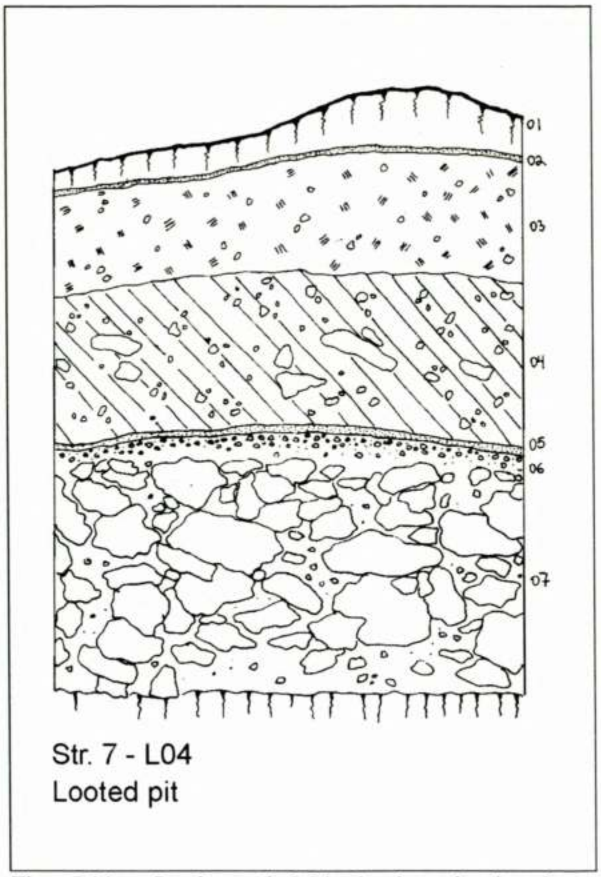


Fig. 5.11a. Section of L04, in looted pit above excavation, 1.5 m wide.

Operation L04

Dimensions: 1 x 1 m
Contexts: 14
L04.01: topsoil
L04.02: plaster floor
L04.03: marl with limestone inclusions
L04.04: light brown soil and limestone rocks
L04.05: plaster floor
L04.06: small rubble packing under plaster floor
L04.07: large limestone rocks
L04.08: loose grey soil, whole *Pomacea* shells
L04.09: white marl
L04.10: white marl with dark brown soil lenses
L04.11: small loose rubble, some burnt limestone
L04.12: dark brown soil lens
L04.13: limestone rubble and light brown soil packing
L04.14: large limestone rubble and dark brown soil

This operation was restricted to a 1 x 1 m testpit because it was located inside a looted pit on the south side of Str. 7, where exposing a larger area would have run the risk of loosening the large limestone rocks in the overhanging layers. Contexts L04.01 through L04.07 were identified after cleaning off the section walls in the looters' pit; no sherds were collected from these contexts, but two plaster floors were visible: the later one only a few centimeters below the mound surface, the earlier one roughly a meter of marl and limestone fill below (Fig. 5.11a).

Excavation proper began with context L04.08, a midden layer of loose grey soil with a concentration of whole and partial *Pomacea* shells and a large sample of Late Preclassic sherds. The two layers below this, L04.09 and L04.10, contained very little cultural material (Fig. 5.11b).

Ceramics were again frequent in a construction layer (L04.11) of small limestone rubble, loosely packed with no mortar. A ceramic deer head, possibly part of an effigy vessel, was found in this layer (Fig. 5.12).

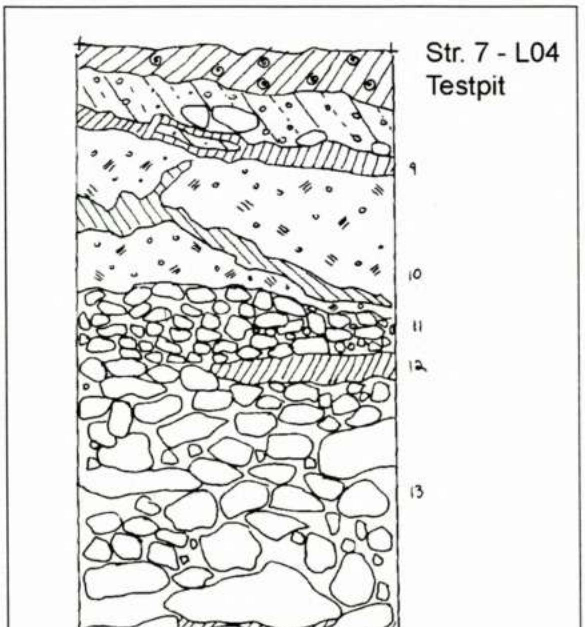


Fig. 5.11b. Section of L04, excavation in looted pit, 1 m wide.

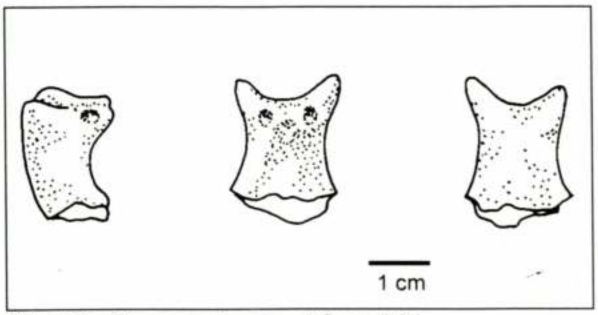


Fig. 5.12. Ceramic deer head from L04.

A lens of dark soil (L04.12) that separated this from the rubble layers below, contained some shell, bone, and charcoal, and may represent an ancient exposed platform surface. Below that were two rubble fill layers of large rocks that impeded further excavation, given the small size of the testpit and the increasing risk of collapse.

The excavation was terminated at about 3 m of depth from the surface of the looters' pit, and slightly over 4.5 m from the surface of the mound. Bedrock was not reached, but the lowest layers were apparently those of construction of the platform on which this and nearby mounds rest. All ceramics encountered in this testpit were Preclassic, suggesting that both platform and mound belong to the early construction activity of the site core.

In summary, Str. 7 was constructed entirely in the Preclassic on top of a platform consisting of a thick layer of large limestone rocks, and after a period of use indicated by the layer of sherds and *Pomacea* shells, it was enlared at least twice. The first phase of enlargement after construction was capped with a carefully built plaster floor resting on top of a packed layer of small rocks; the second phase of enlargement was finished with a less well-defined plaster floor, now in advanced state of deterioration because of its proximity to the surface.

Operation L05 was a trench excavation conducted over two seasons of fieldwork, and will be addressed after the description of all testpit operations, although it will be out of order in the numerical sequence.

Operation L06
Dimensions: variable, across 11 m of exposed section
Contexts: 11
L06.01: cut limestone blocks and soil mortar
L06.02: uneven rubble and some soil
L06.03: cut limestone blocks and marl
L06.04: packed marl
L06.05: small rubble and dark soil
L06.06: plaster floor
L06.07: uneven rubble and soil
L06.08: cut limestone blocks and soil mortar
L06.09: rubble fill
L06.10: large limestone rubble and marl lenses
L06.11: limestone rubble

This operation involved cleaning off an extensive area, approximately 11 m across, of section cut away into Str. 18, the eastern pyramid. The area was destroyed by bulldozing activity apparently aimed at obtaining limestone blocks and fill for construction. Looting was probably limited to chance finds, but very few sherds and other artifacts were recovered from this mound, so extensive looting is unlikely to have occurred.

Bulldozers cut into the core of the mound from the east, exposing its construction sequence, and leaving the remaining section in a state of disarray that made documentation difficult. As a result the numbering sequence of the contexts appears to be haphazard, because it reflects the order in which the contexts became visible and were able to be reached and cleaned off (Figs. 5.13a and 5.13b).

L06.01 was the first identified context, a construction "task" of cut limestone blocks, about 8 to 10 courses high and 4 blocks across, measuring roughly 2.5 m in width. The blocks were carefully shaped and uniform in size, with mortar of light brown soil. To the right, or north, of this task another one was identified, labeled L06.03, also measuring 2.5 m in width and constructed of carefully shaped limestone blocks. The only difference was in the mortar, in this case with very little soil and consisting almost entirely of white marl. In between the two task walls, context L06.02 was a section of loose fill of soil and limestone rocks of varying sizes, apparently dumped in to fill the space between the cut blocks, with no mortar. Two other construction tasks were identified, one to the north of L06.03, consisting of the same loose rubble fill as L06.02, and one to the south of L06.01, consisting of more courses of cut stone built up against L06.01, but with a mortar of darker soil. Further to the north and south were the exposed sides of the bulldozed section. The northern side, L06.10, comprised both natural and cut limestone blocks, and some marl and plaster lenses that did not appear to have been floors or were too weathered to be identified. The southern side, labeled L06.11, was in worse state of preservation, and not much

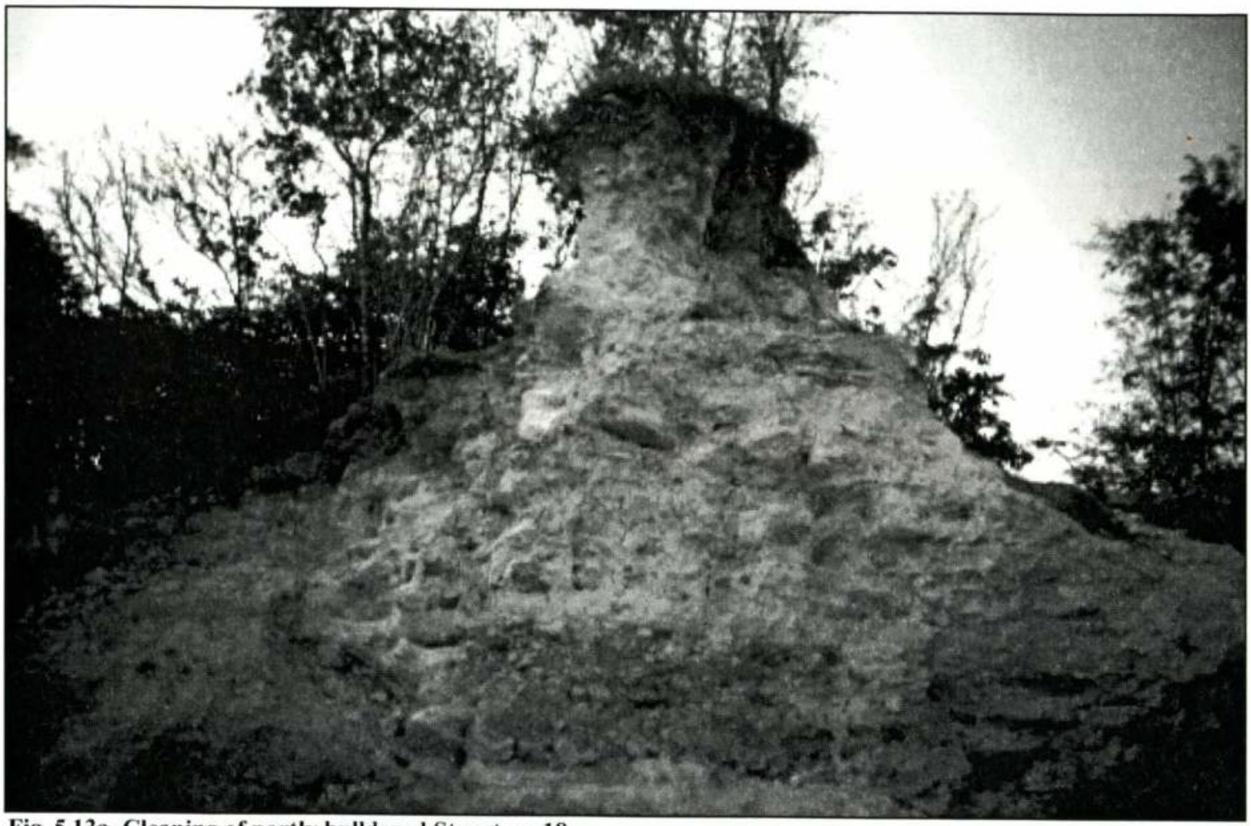


Fig. 5.13a. Cleaning of partly bulldozed Structure 18.

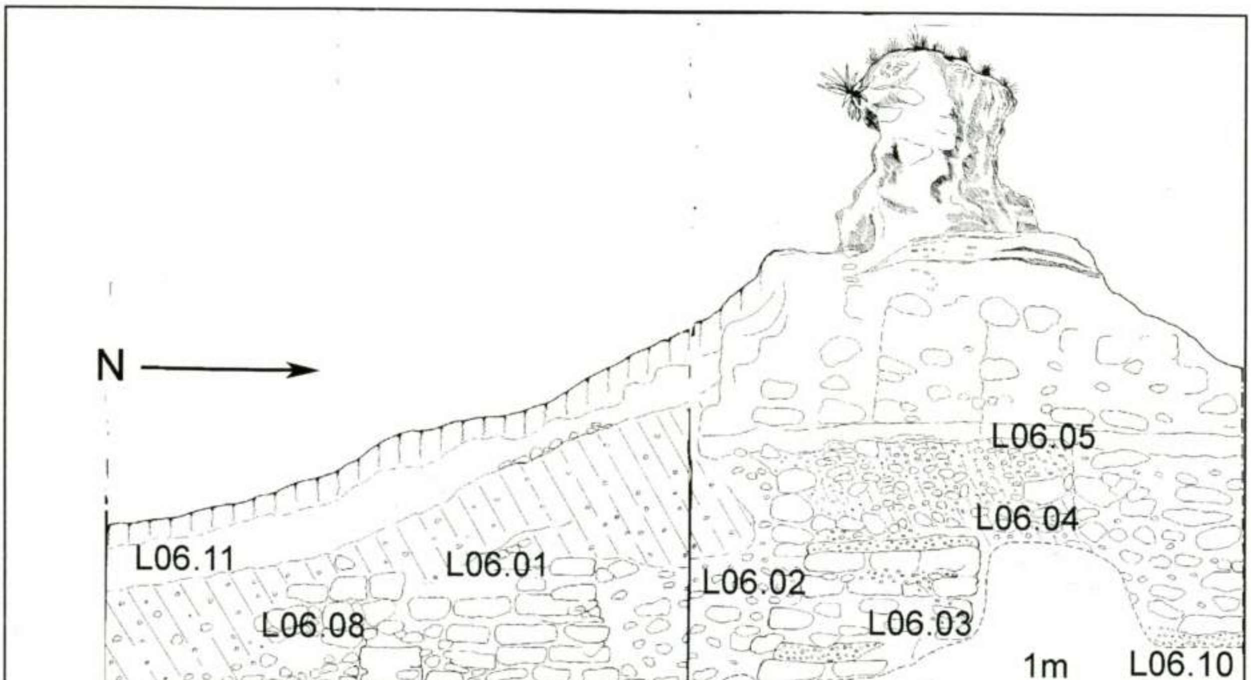


Fig. 5.13b. Section of L06, Str. 18; profile drawing by Sheena Howarth.

more than limestone rocks and soil could be seen in the section.

In the central portion of the bulldozed trench, above the identified construction tasks, a 10 cm thick layer of solidly packed white marl (L06.04) capped the courses of stones of L06.03 at an angle dipping into the western and unexposed core of the mound. This layer may be covering an earlier structure, and separated the series of tasks from the less neatly constructed fill of uncut stones (L06.05) stacked above and all the way to the top of the mound.

Below the tasks of cut stone a hard and well-defined floor of polished plaster (L06.06) was found lying directly below both L06.01 and L06.08. It appeared that loose rubble fill (L06.09) but no other cut stones comprise the construction of the layer below the floor, but we did not excavate further into the mound below the area exposed by the bulldozer. The entire operation recovered very few sherds and other artifacts in the construction fill, and all date to the Late Preclassic. This pyramid is therefore contemporaneous with the construction of Str. 7 and with the western pyramid. The latter, however, had some earlier material, which might reflect that the earliest occupation at Louisville was located at the western end of the site core rather than at the eastern end.

Overall, the operation at the eastern side of Str. 18 proved interesting because it exposed a sequence of construction in parallel tasks previously identified at the nearby site of Nohmul (Hammond et al. 1985: 195, fig. 14). At Louisville a first phase of construction was capped by a plaster floor, upon which several parallel "walls" of equivalent size were constructed either side-by-side or interspersed by loose rubble poured in-between. Multiple hands can be seen in the use of different mortars, while the cut stone blocks are essentially the same size for all tasks. Separate crews of workers could build these at the same time, expediting construction, and resulting in a single-phase massive building effort. Over the platform erected in this manner, further construction was carried out but without the carefully cut blocks stacked in parallel walls. At the time of excavation this pyramid mound was in a serious state of erosion caused by the bulldozing activities, and no estimates could be made of the original height of the mound nor evidence could be seen of what had been built upon it.

In 2002 Str. 18 had suffered considerable further damage. Vegetation had grown back over the eastern section that had been bulldozed just prior to this project in 2000. More bulldozing activity was carried out between our excavation seasons, and was taking place when we arrived in 2002. Looting seemed to have increased because small tunnels could be seen into Str. 18 in addition to large bulldozed trenches. The western side of the mound, which was previously intact, had been removed almost to the center of the pyramid, exposing more evidence of the task construction phase and at least three plaster floors (Fig. 5.14). In addition, the southeastern side had been quarried (Fig. 5.15), so that what remained standing at the time of our second season was only a sliver of deposits a few meters thick at the center of the structure, with eastern, western, and southeastern sides destroyed. Given the pace of quarrying activities, it is likely that this project documented the last recoverable data from this structure and from the site in general.

Nevertheless, with the southeastern side newly exposed by a bulldozed trench, we were able to clean off further sections of architecture. In particular two portions of earlier buildings were discovered, that had been overlain by the single-phase construction in tasks. On the northern side we cleaned off eight courses of cut limestone blocks forming the outer wall of a building. A corner was identified, with the wall turning to the south, clearly part of the same building because of the interlocking courses of stone (Fig. 5.16).

Further south, and entirely below the layer of the previously described wall, we found the remains of an earlier building in a fairly good state of preservation (Fig. 5.17). We were able to identify the outer walls of the building, standing nine courses of cut blocks high, and about 3.5 m wide. From the material we cleaned off, a number of Late Preclassic sherds were recovered, as well as lumps of plaster with red and orange paint that had covered the walls. This building suggests similarities with Petén architectural styles, with a central portion of the façade projecting forward about 15 cm from the flanking sides. We recovered part of the central portion with one stone of the medial moulding still in place, and part of the southern side, which continued further into the mound. We did not find corners, doors, or the base of the standing walls, so no estimates can be made of the overall size of the building. A significant amount of plaster was still adhering to the walls, and in the central portion we could see traces of red paint in the upper part and below the moulding, and traces of orange paint at the base of the exposed wall.

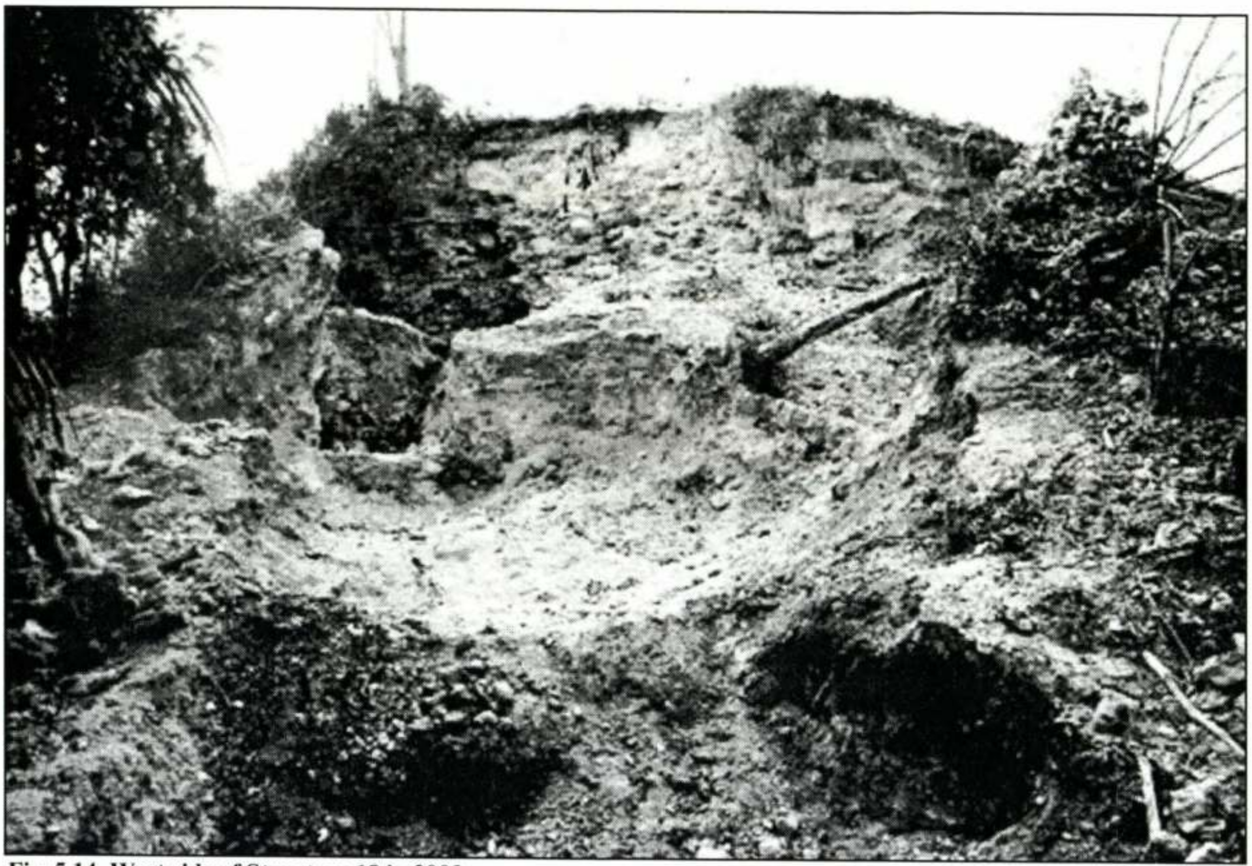


Fig. 5.14. West side of Structure 18 in 2002.

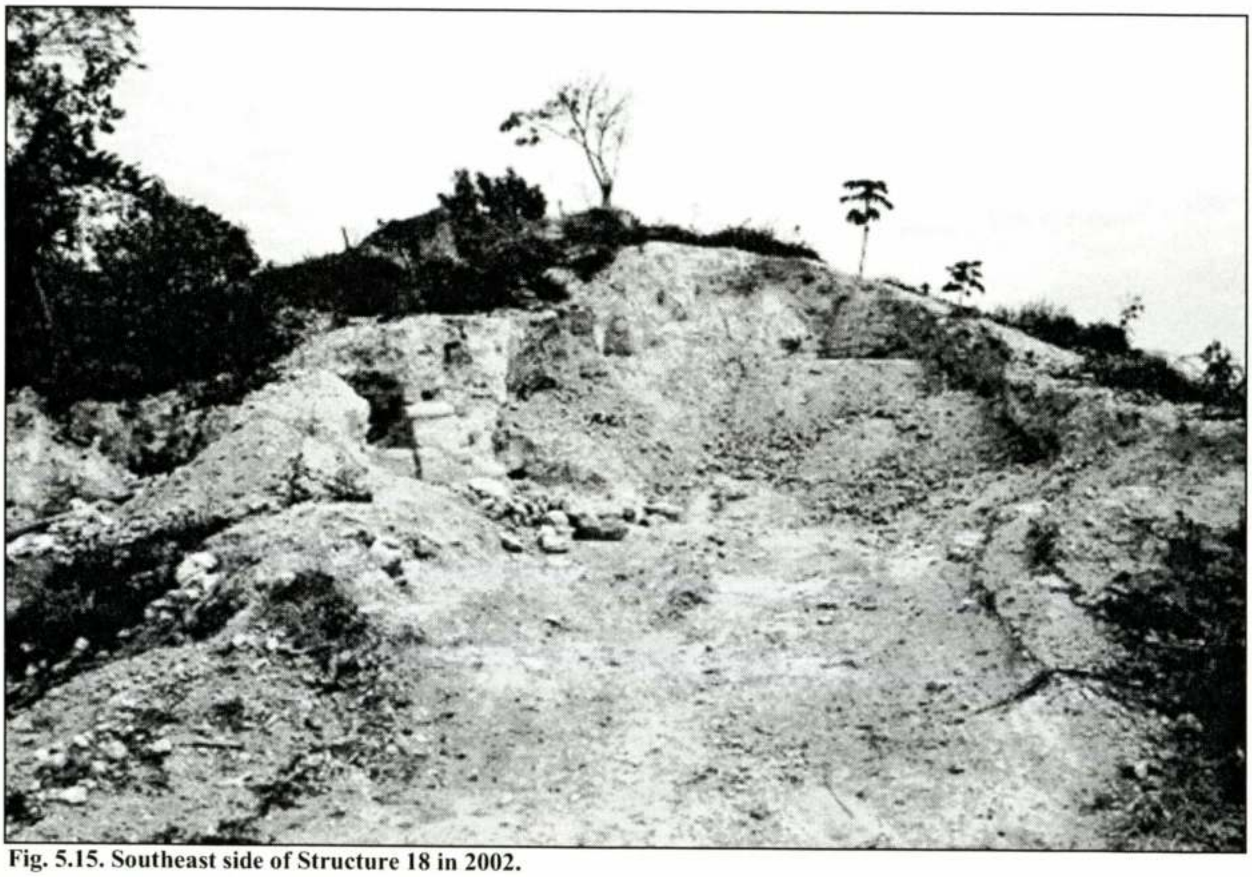


Fig. 5.15. Southeast side of Structure 18 in 2002.

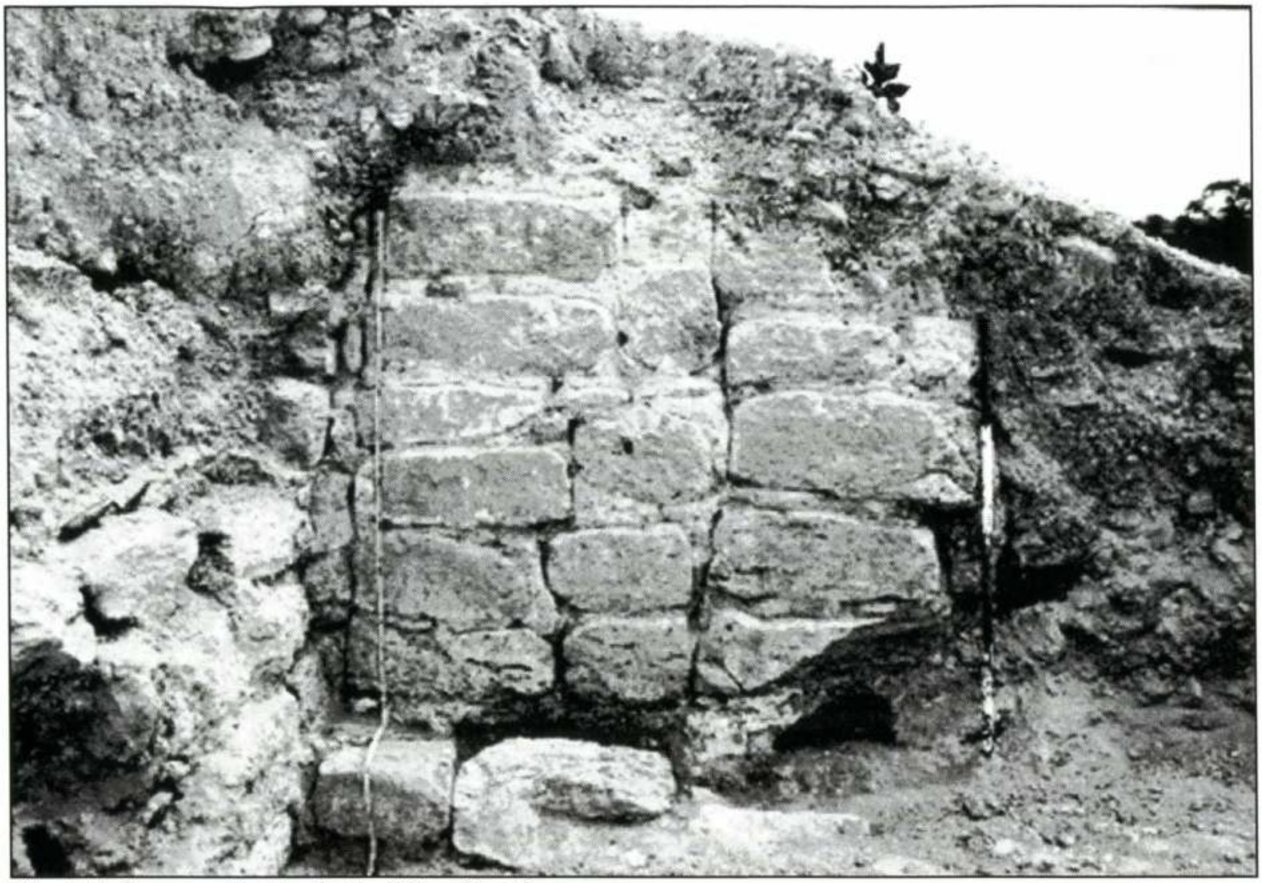


Fig. 5.16. Corner wall of buried building, Str. 18.

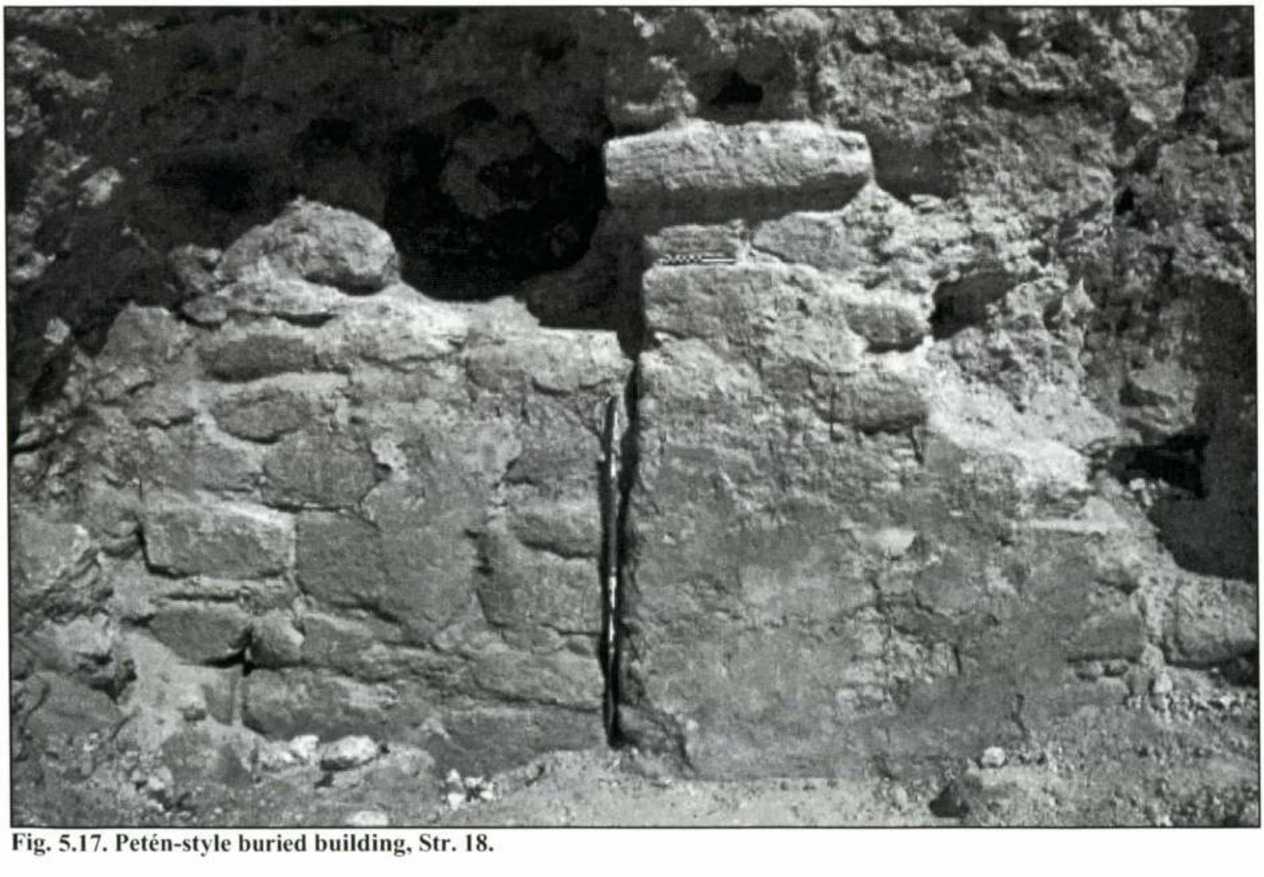


Fig. 5.17. Petén-style buried building, Str. 18.

Operation L07
Dimensions: 2.5 m wide x 2.2 m deep
Contexts: 7
L07.01: topsoil
L07.02: large limestone rubble
L07.03: brown soil, charcoal, grey soil lens
L07.04: grey and brown soil layer, burnt rocks
L07.05: marl and dark soil
L07.06: very dark brown clay
L07.07: bedrock

This operation was located in the unmapped area north of Str. 12 at the edge of a cane field. Looters had removed deposits from an area measuring approximately 3 m wide, and exposed a very rich midden. We recorded the stratigraphy of the section because the midden lay directly below the construction phase of the platform north of Str. 12 in the eastern part of the site core. We collected pottery for identification of the date of construction of the platform; the ceramics were Late Preclassic, and types specific to Louisville were identified by Duncan Pring and included here as Appendix C.

Below the thick topsoil layer of the cane field was a 1 m thick platform construction phase (L07.02) of large limestone rocks and light brown soil. Directly below it was a 20-30 cm thick midden of grey clayey soil, charcoal, and brown soil (L07.03), particularly rich in ceramics. Numerous sherds, some re-fitted to form large parts of vessels including a nearly complete bowl (Appendix C), were recovered along with *Pomacea*, some marine shells, chert artifacts, and chert debitage.

A layer of grey and brown soil with interspersed bits of charcoal and burnt rocks (L07.04) was below the grey clayey lens at the base of the midden. This layer contained some cultural material, but significantly less than the amounts found in the midden above. A layer of stacked lenses of white marl and dark soil (L07.05) was found to contain very small amounts of artifacts, some of which had migrated downward from the two layers above, as a few sherds could be re-fitted to ones from the midden. A dense layer of very dark clay (L07.06), devoid of cultural material, lay directly on top of bedrock (L07.07).

Operation L08
Dimensions: 50 cm x 8 m
Contexts: 4
L08.01: topsoil and small rocks
L08.02: limestone rubble and light brown soil
L08.03: dark brown soil
L08.01: bedrock

This operation was carried out specifically to test the postulated existence of a sacbe connecting the eastern and western pyramids. In 2000 sugar cane had covered all areas where a testpit could be excavated. In 2002 a narrow trench, long enough to span the width of a possible sacbe, was placed across a rise in the terrain about halfway between the two pyramids. The testpit was excavated down to bedrock, a total of 85 cm below the surface. Located in a recently plowed field, it had a thick layer of topsoil, which contained numerous small rocks. Below that was a 40 cm thick layer of limestone rubble packed with light brown soil (L08.02), and underneath the large rocks of this layer was a dense dark brown soil (L08.03). Bedrock was reached at a fairly shallow depth, an expected occurrence given the frequent limestone outcrops nearby this spot.

The sherds recovered from this testpit were very eroded, but the identifiable ones date to the Late Preclassic in the rubble fill, and to the Early Classic from the surface. Although we could not conclusively identify the cross-section of a sacbe with this testpit, we were able to detect a layer of artificial construction that may have served as the bed of a sacbe positioned along the ridge of a limestone outcrop lying close to the surface. No edge stones were found that might have outlined the sides of the causeway, but a number of large ones were noticed scattered in the field, and piled around a palm tree. If those were part of a sacbe, they might at some point have been aligned in situ, and were moved by modern farmers into a visible pile to avoid when plowing.

If the ridge that runs roughly along a line between the two termini of the site core was utilized as the marker for a sacbe, perhaps the position of the two pyramids was secondary to the conception of the causeway that would have connected them, taking advantage of a natural high path in the terrain. It is precisely because of the proximity of the bedrock to the surface that a sacbe located along this ridge would not have needed a thick deposit of construction layers, and for the same reason evidence of its existence might have been obscured by the recent agricultural activities.

TRENCH L05

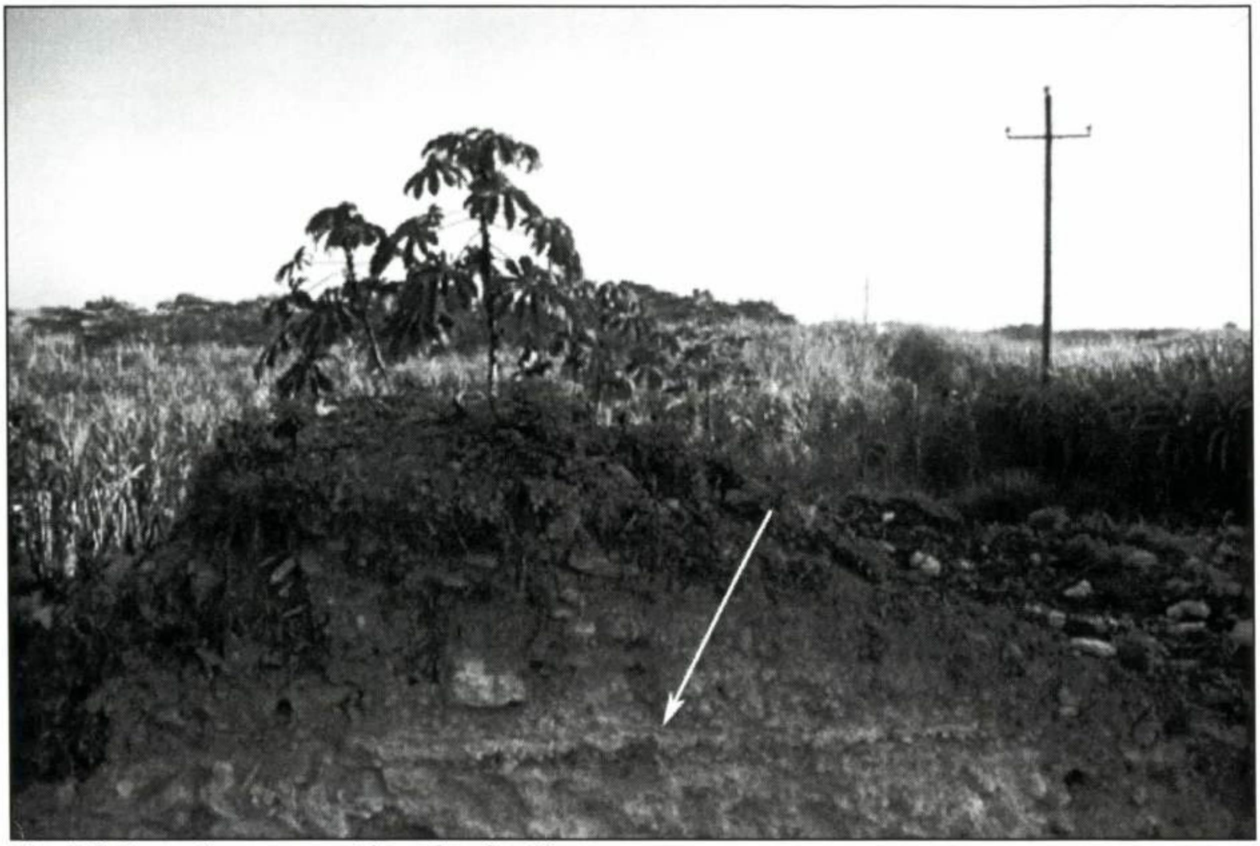


Fig. 5.18. Plaster floor preserved in section, Str. 12.

Operation L05 took place on Str. 12, north of Str. 1. The trench was excavated in order to identify the building that Gann had dug in 1935-36 and thus to restore context to the stucco heads and other fragments at the British Museum and Tulane University.

This mound was selected as the possible location of Gann's excavation for a variety of reason. The overall size of the mound reflected the measurements given by Gann in his manuscript (Appendix A). A number of old looters trenches pitted the western portion of the mound, but the central and eastern sides showed evidence of previous excavations that had rectangular corners and measured roughly 5 x 5 m, were in part backfilled, and may have been Gann's trenches. One 1 x 1 m pit was also identified that might have been the testpit excavated at Louisville by Ernestene Green in the early 1970s (Green 1973: 281-282). Collections of surface ceramics indicated that Late Classic material was present in this part of the site core, and thus correlated with the Late Classic date originally suggested by Gann. In addition, an exposed cross-section of the mound indicated the presence of a plaster floor that we later identified with the first of two phases of enlargement after the fill-in of the building that Gann had described (Fig. 5.18); the second and latest floor which he had encountered was probably closer to the surface of the mound, and no longer existed in 2000.

The initial trench measured 1 x 12 m and was placed E-W along the long axis of the mound so as to encompass as much undisturbed material as possible as well as part of the old excavation that might have been Gann's. Large amounts of the rubble fill described by Gann were removed until the footprint of a building began to become visible. At that stage further extensions were excavated from the original 1 x 12 m trench.

As Gann had indicated the building he encountered had been filled in with limestone rubble partly taken from the walls of the building itself. We removed this rubble, which was packed with plaster, and identified separate contexts for the same fill to distinguish each meter of the trench in the event that modeled plaster would come to light. In the interior of the building only a few examples of stucco with traces of paint were found, and only one complete enough to suggest that it might have been part of a modeled glyph (Fig. 5.19). The latter was found resting facedown directly on top of the floor. The building we encountered presented several architectural features, such as doors, walls, and floors, that were consonant with Gann's descriptions. A plan of these features was drawn at the end of the first season in 2000 (Fig. 5.20).

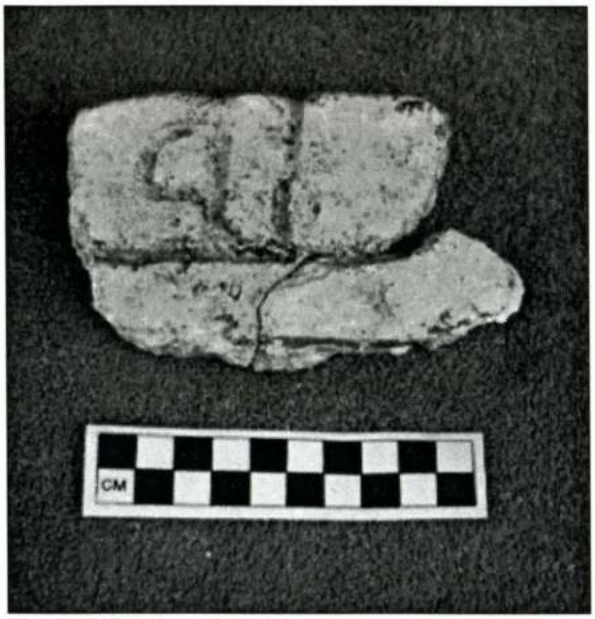


Fig. 5.19. Portion of modeled stucco glyph, Str. 12.

The first feature identified, in the eastern end of the trench, was an E-W pier between two door openings, measuring 2.45 m in length, 75 cm in thickness, and only about 45 cm in height, or roughly three courses of cut stones (Fig. 5.21). All excavated piers measured exactly the same in thickness, but varied between 2.35 m and 2.45 m in length. While the one at the eastern end had the highest number of preserved courses of stone, the others had only the lowest course, and one, located where "Gann's trench" intersected our trench, was only visible in the edges of the plaster floor that turned up against the removed stones (Fig. 5.22).

The plaster floor, a very hard polished surface, that we originally encountered at the eastern end of the first identified pier continued throughout the length of the trench, running around the bases of the piers. At the western end of the trench another wall was found, running perpendicular to the piers. At first the wall was interpreted as the west wall of the building described by Gann, in particular because it was exactly 10.4 m away from the far corner of the easternmost pier, the measure he had given for the building's length. However, the easternmost pier was not the corner of the building because a door opening was clearly to the east of it, and if the piers were the north wall, as identified by Gann, then the west wall should not have been running further northward.

It became clear that the west wall we encountered was a modification applied to the building after its construction and use: the wall was constructed over the floor that turned up against the piers, it did not have the same quality of cut stones as the piers, and it was put together with a different mortar containing more soil that the rest of the architecture. Also, the ceramics included in the mortar of the piers and fill of the building, analyzed by Kerry Sagebiel from University of Arizona, contained a number of recycled Late Preclassic sherds most likely quarried along with construction material from nearby buildings and platforms of the site core. The mortar of the west wall, however, did not contain early material, and because of the Late and Terminal Classic sherds in it, was clearly built after the primary use of the structure, and before it was buried and enlarged. The west wall continued north until it abutted another E-W wall, parallel to the piers and 80 cm thick, 4 cm thicker than the piers. On the floor in the corner created by the west and north walls we found traces of burning from a fire along with a number of small finds: ceramics, shell, a human tooth, and obsidian blades. Perhaps squatters had built the west wall and left traces of their activities in these finds.

The north wall stood three courses of stones above the floor and was constructed with mortar like that of the piers and with similarly cut stones. The trench was extended further to investigate the north side of this wall. On the north side, 20 cm below the level of the floor, a plinth projected out 10 cm with five courses of cut stones below, forming what appeared to be the back of the building resting on the platform below (Fig. 5.23).

On the south side the trench was also extended further, in two places: one opposite the north wall and east of that, and another at the eastern end of the trench directly south of the first found pier. At the western end, as expected because of the visible old excavations, we found backfill sitting on top of an entirely removed pier, and south of that the floor had also been removed and no traces of the building could be followed. The layer of backfill, however, contained a most interesting metal artifact, which we identified as an umbrella wire, and sent to Messrs. Swaine, Adeney Brigg of St. James's for analysis.

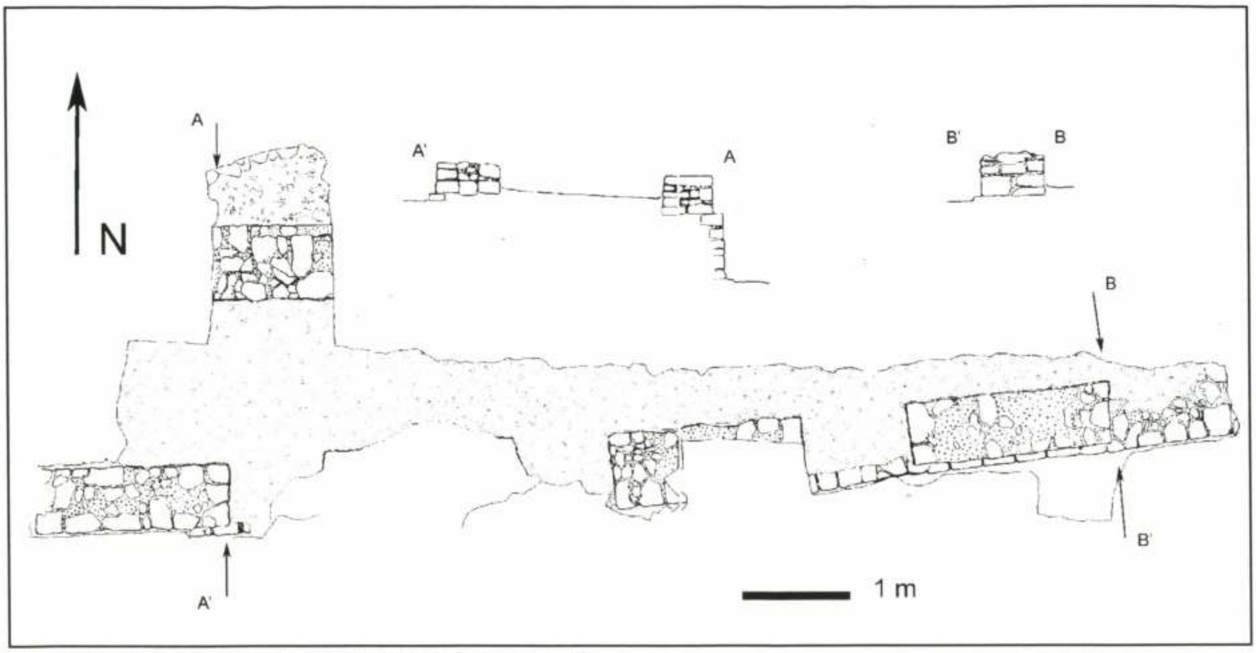


Fig. 5.20. Plan of Late Classic building Structure 12. Drawing by Candida Lonsdale.

The report provided information supplied by Mr. Kirk, of the umbrella-rib makers Hoyland Fox:

> [The rib] it would have been around 21" in length and was probably around 0.075" in circular diameter, used in a ladies or gents rain umbrella. The steel has a Vickers hardness value of 430, and had probably been heat treated in some way: the steel was in patented condition; this is a heat treatment process which obtains optimum strength. Unfortunately the microstructure of the steel was not in hardened and tempered condition; this was a hallmark of Fox's ribs, which were hardened and tempered to give superior strength. It can therefore only be concluded that the rib was not from a Samuel Fox product.
>
> Microstructural analysis indicated that the steel was either 0.70 or 0.80% Carbon, a high carbon steel. The rib was coloured by a wet painting method known as Japanning introduced in the 1850's. The sample showed sophisticated machining of the flattened end and the square cropped end, indicating that it was produced on a specialist machine rather than by hand; this almost certainly means that the rib was produced in the early 20th century. Samuel Fox & Co withdrew steel ribs such as this in 1920; other companies tended to follow suit.

Gann and his wife had been at Louisville in 1935-36 and it is entirely likely that the umbrella spoke was left over by their visit. With the certainty that part of this building had previously been excavated, and that an artifact of the beginning of the 20th century was left in the backfill, we continued to expose the southern side of the pier at the eastern end of the trench.

Although numerous fragments of stucco had been found in the fill and on the floor of the building, not many had traces of modeling or paint. On the other hand, directly on the other side of the pier, we recovered mostly stucco, from an area that had also been previously excavated. No heads were found, and few recovered stucco fragments were modeled, but most were painted with one or more colors: pale yellow, pink, brick red, claret, orange, and only one piece with blue. The stucco appeared to have been broken and packed against the wall; only at the base of the doorjambs on the northern corners of the piers were painted pieces in situ (Fig. 5.24).

At the eastern edge of the trench the interior floor had been in part removed. Below this was the

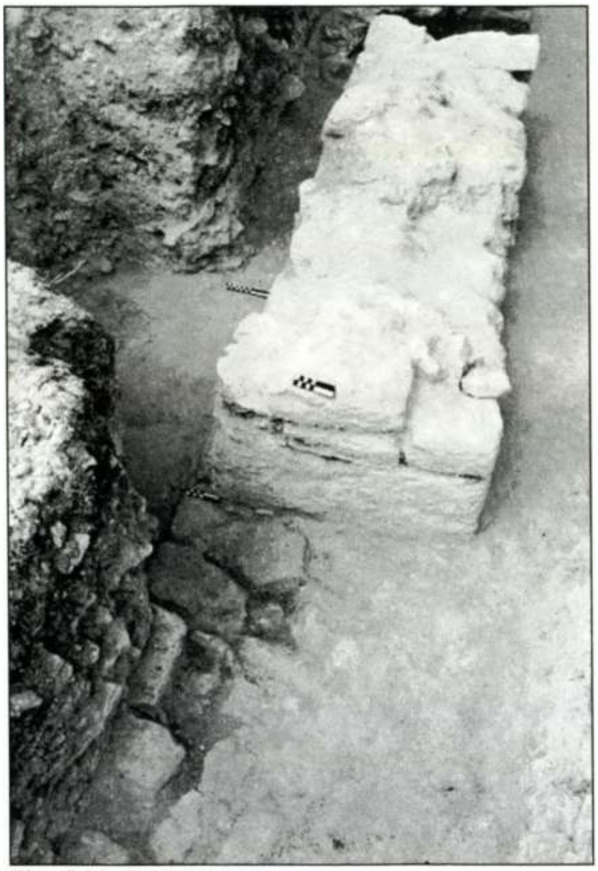


Fig. 5.21. Easternmost pier on south wall, Str. 12. View E—W.

packing of stones that ended on the south side of the pier in a plinth that projected outward 10 cm (Fig. 5.25), as did the plinth on the north side. A shallow step 10 cm down led to another floor south of the pier, and below the mass of stucco.

The plinth ran along the south side of all four identified piers. A polished floor lay between the piers on the south side and a wall on the north side, identifying the interior of the building. It became clear that Gann had excavated the south side of the piers, and had mistaken it for the north wall. He believed the south wall had been entirely destroyed as well as the east wall, and what he thought had been the west wall was in fact a later modification; he had never found the north wall. We could not test where the east and west walls had been because at the east edge of the mound a cane road had been cut into it, and at the west edge looters had dug numerous pits. Nevertheless, the piers outlined a minimum of five door openings, averaging 1.2 m wide each, although seven is a more likely number in relation the overall size of the mound.

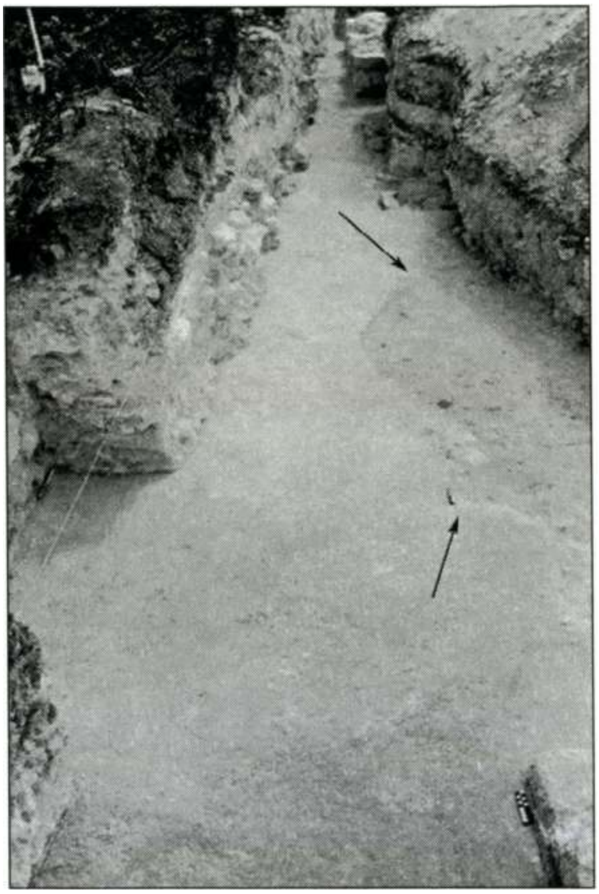


Fig. 5.22. Pier entirely removed from Gann's trench. View W—E.

The building was a single long room, 1.95 m in interior width, and over 12 m in length. The doors faced south, towards the early pyramid, Str. 1, and the back wall on the north side rested over a platform that was probably the same Preclassic platform upon which both Str. 1 and Str. 7 had been built.

Gann had excavated the outside of the structure, had removed the stones and delivered them to the land owner in accordance with an arrangement they had made (Gann 1939: 253), and had kept the stucco heads and elaborate fragments. He believed he had been working in the interior of the building, perhaps also because of the presence of a polished floor on the south side of the piers forming the south wall. He had thought the heads had been buried in the interior of the building, when in fact they were along the outside of the façade wall.

In 2002 the excavation was re-opened to explore the possibility that some parts of the front façade had

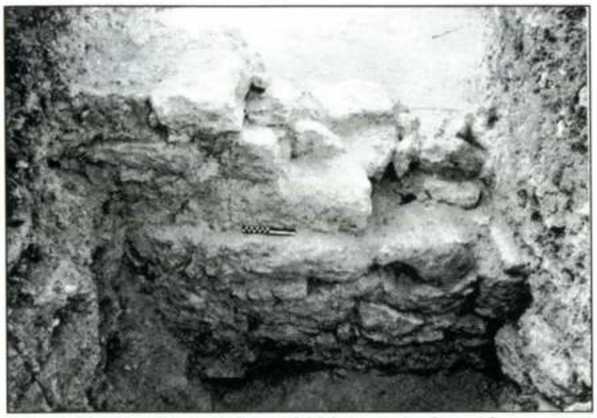


Fig. 5.23. North wall from 2000 trench, Str. 12.

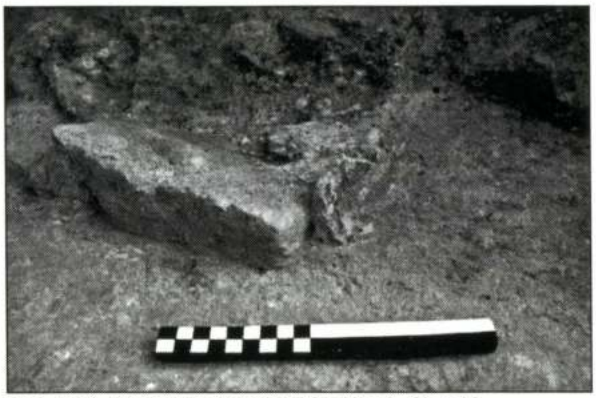


Fig. 5.24. Stucco in situ on doorjamb, Str. 12.

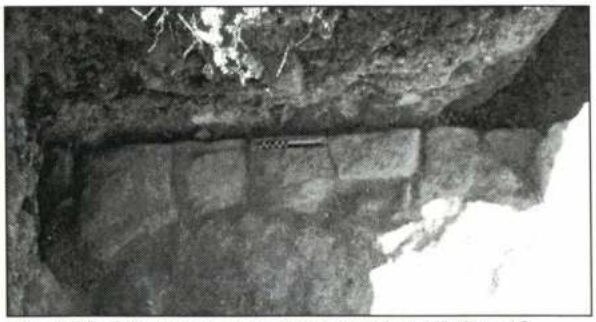


Fig. 5.25. Plinth running along south wall, Str. 12.

not been excavated by Gann and were undisturbed. A trench was placed perpendicular to that of the previous season, cutting across the middle of the earlier trench, through one of the doors, and towards the back wall, where the mound still stood with the later floor from an enlargement phase preserved in the section.

The excavation did not encounter any undisturbed portions of the building on the south side. On the north side, after removing the floor that had been visible in the section (Fig. 5.26), we again intersected a portion of the north wall, further to the east of the part that had been excavated in 2000. The wall stood 1.25 m tall and, over the first two courses of shaped stones, it was made with uncut stones fitted together with plaster mortar to form a solid wall covered on the interior by a layer of smooth stucco. On the north, or outer side, the stones did not appear to have been covered, which further supported the idea that this was in fact the back of the building (Fig. 5.27). No evidence of a door was found that would have faced north.

On the south side of the trench the floor below the plinth was not preserved in as good condition as the interior floor, but on the surface of that a number of painted stucco fragments were found, some of which were modeled and may have been part of glyphs (Fig. 5.28a and 5.28b). A 1 x 1 m trench was dug at the base of the plinth directly south of the door opening, and below the outer floor, to test the possibility that a dedicatory cache might have been buried in this spot. The small trench exposed the construction sequence of the floors, plinth, and base of the trench, but did not in fact uncover any finds other than a few sherds that did not show any differences with those found in other construction and fill material for this building.

The operation overall was successful in identifying the building that Gann had excavated. A number of lines of evidence suggest that this was indeed the original context of the stucco heads: the size of the mound, the date of the materials recovered, the backfilled trenches along the south side, the umbrella spoke, the size of the excavated doors compared with the sizes described by Gann, the presence of much architectural plaster, as well as some pieces of modeled stucco and many painted fragments, and the construction sequence of termination and enlargement of the overall structure.

A number of possibilities have to be considered for the original location of the heads in this structure. The heads could have been part of a "gallery", affixed to medallions, or "frames," similar to the arrangement of stucco medallions on the inner corridor of House A at Palenque, which might have been the original location of the heads found under Pacal's sarcophagus (Robertson 1983: 74). The Louisville collections and the fragments found in the excavation indicate that most heads lacked body parts, with the exception of the torso, which would suggest that perhaps a series of portraits in frames was the likely arrangement. The fact that there was a floor on the south side of the façade and that Gann

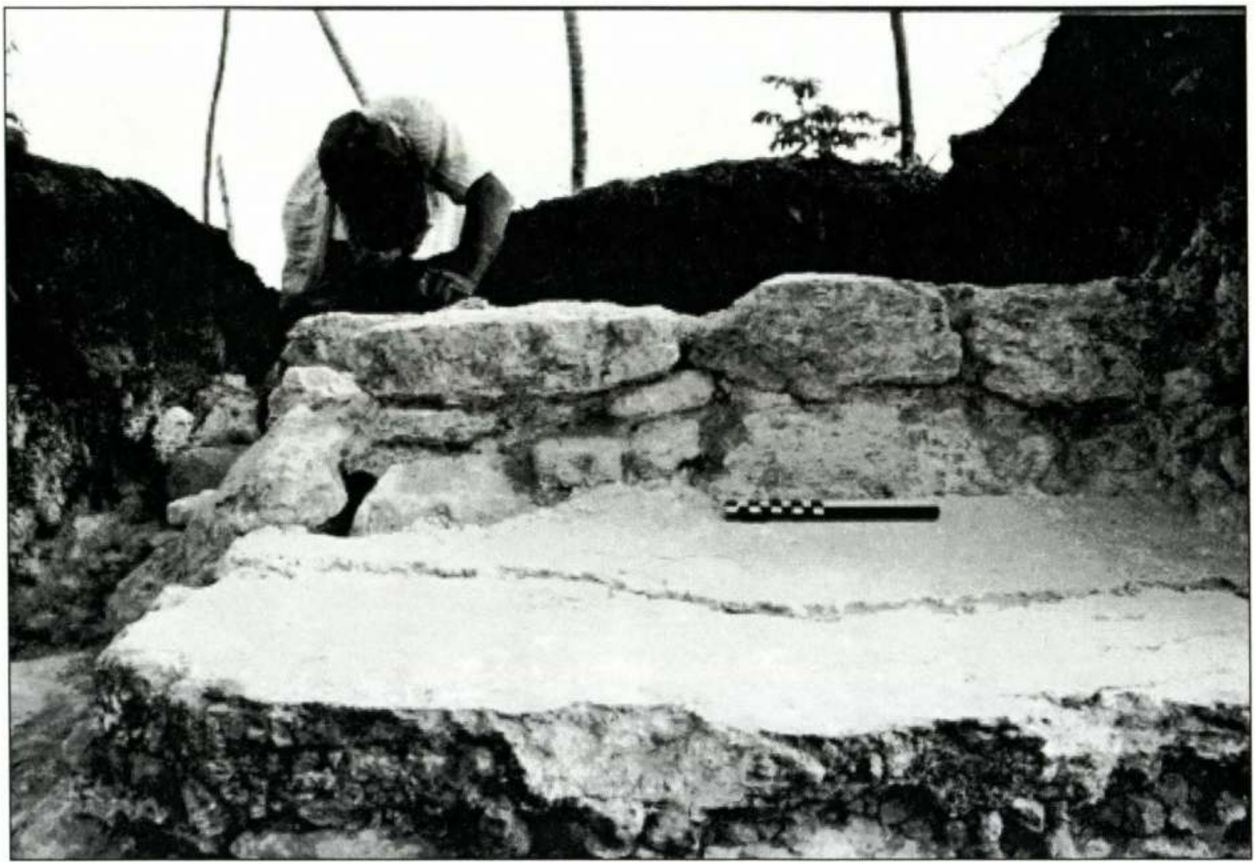


Fig. 5.26. Exposed floor from section, Str. 12. See also Fig. 5.18.

believed there had at one time been another wall south of the piers presents the possibility that the building did not comprise only a single room, but rather two parallel rooms, with the decoration on the outside wall of the inner room. If that were the case, then Gann would have been correct in stating that the heads were found inside, and not outside the building, but he was still mistaken about what he thought was the north wall. Nevertheless there seem to be too many heads in the Louisville collection to allow a display in the style of House A.

It is my belief that the heads were arranged in a frieze running along the cornice of the building, with full-bodied figures perhaps set on the corners. This recalls the examples of Lamanai Structure N10-28 and Seibal Structure A-3, both non-residential buildings dating to the Late and Terminal Classic decorated with an elaborate program of modeled stucco figures (Shelby and Reents-Budet 2001; Willey 1982). I believe that if Louisville Str. 12 had a stucco frieze, the decoration of the building would have extended along the front and sides, but probably not along the back. The number of doors on the south and the lack of doors on the north side suggest that the focus of the building was towards the pyramid, Str. 1, not the small plaza and structures visible in the cane on the north side. Also, the back wall was constructed of less carefully cut stones than the façade, and although the interior was plastered and smoothed, the exterior appeared to have been left bare; therefore, an elaborate stucco frieze above a bare back wall is unlikely.

There is also the possibility that stucco heads were affixed to a roofcomb such as occurs at Rio Bec and Chenes sites that have buildings with stucco-decorated roofcombs (Potter 1977). At Louisville, however, no evidence of a roofcomb was found in excavation nor any mention of one was ever made by Gann, and the building did not seem to have had a corbelled vault, so the frieze arrangement appears to be the most likely scenario.

In regards to the evidence of a vault, we did not find any vault stones in the fill of the structure and concluded that the building must have had a beam-and-mortar roof. Gann had reported the same (Appendix A) and in addition he believed the building to have been too wide to support a vault. I believe that, in spite of the lack of roofing stones in

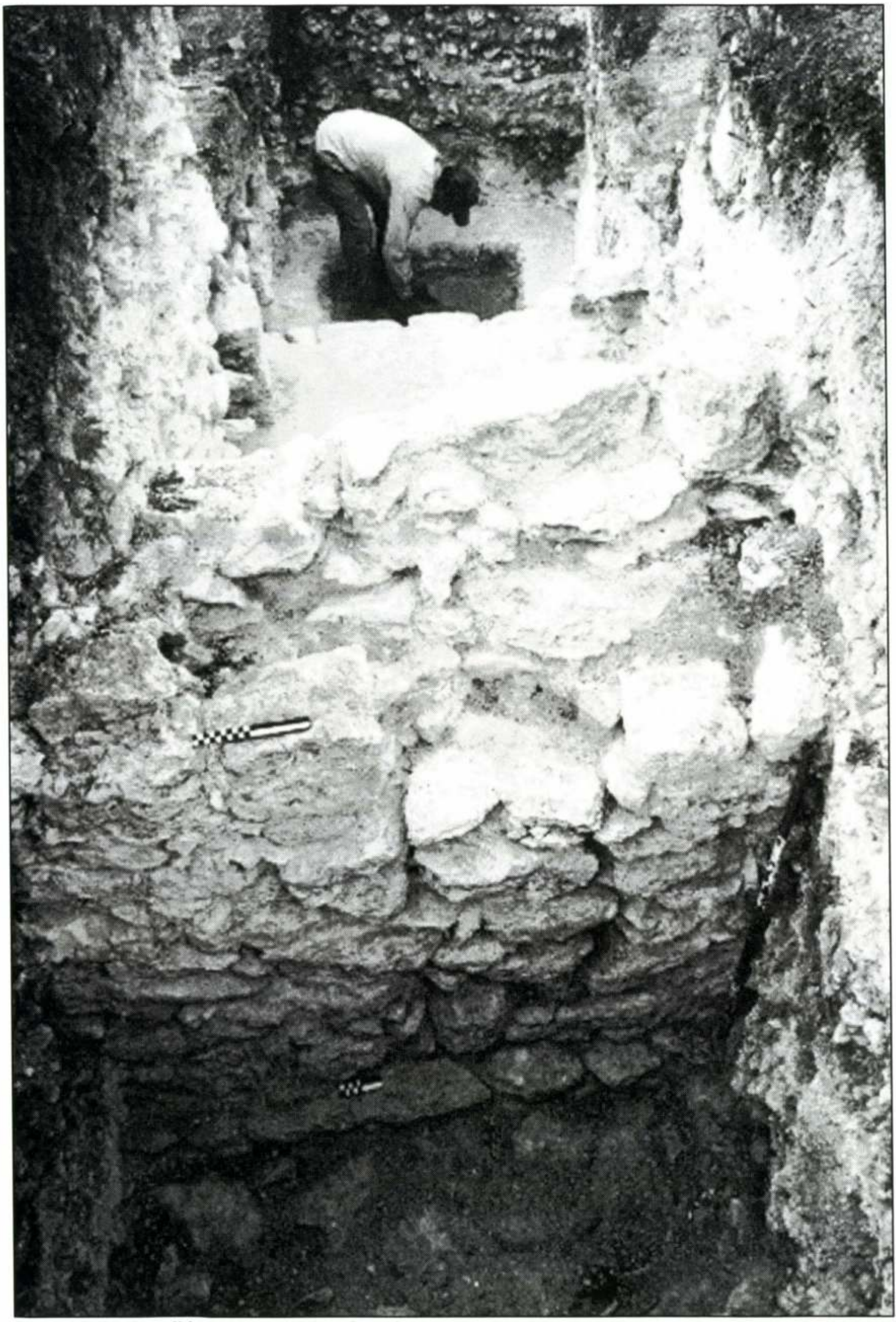


Fig. 5.27. North wall in 2002 excavation, Str. 12.

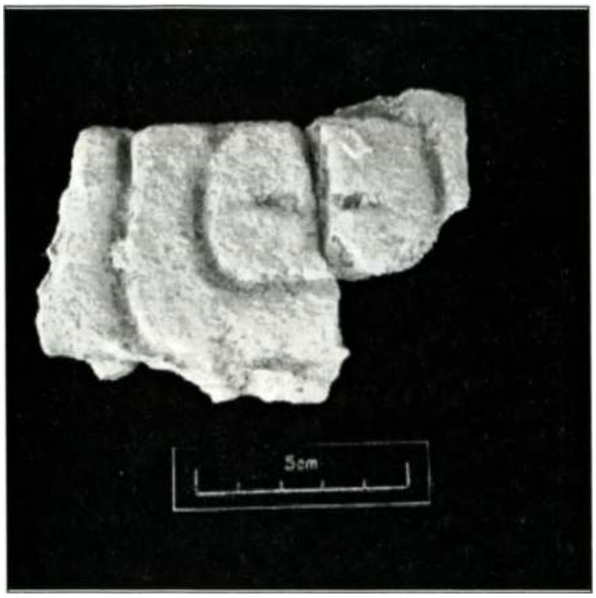


Fig. 5.28a. Stucco glyph fragment from 2002 season.

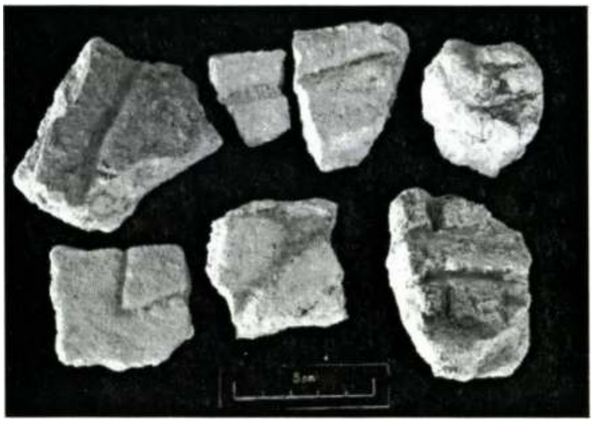


Fig. 5.28b. Modeled stucco fragments from 2002 season.

the excavation, the building might in fact have had a vaulted room. The width, at just under 2 m, was certainly well within the range of vaulted rooms; the construction efforts with cut stone and stucco decoration were sophisticated enough to suggest that the builders had the knowledge and expertise to build a corbelled vault; stuccoed buildings at Lamanai and Seibal as well as at other sites usually had vaulted rooms; and the back wall was slightly thicker than the front wall, presumably to offset the structural instability that mortared uncut stone has compared to stacked cut blocks, and create an even balance for the vault to rest upon.

The reason neither Gann nor this project found the vault stones may be because the building did not collapse after abandonment, but was terminated by intentional destruction and burial. The vault stones, the most elaborate cut stone in this kind of architecture, may have been valuable enough to be removed and recycled elsewhere. The building was not filled in with rubble in its entirety, and the top portion of the walls had been knocked down when it was destroyed. The height of the fill was only up to about 1.3 m—the height of the back wall excavated in 2002—immediately upon which the floor of the later structure was built.

Although the possibility of a vaulted building cannot be ruled out, the most parsimonious argument with the evidence at hand favors the interpretation of a building roofed with wooden beams. Nevertheless, the excavation set out to identify the building described in Gann's writings, from which a heretofore contextless collection of stucco sculptures had been delivered to the British Museum and Tulane University. The evidence recovered with Operation L05 over the course of two seasons supports the identification.

Chapter Six

Discussion and Conclusions

Chronology of the Site

Documentation of the general site chronology came from surface collection, testpits, and one trench excavation. Overall, excavation confirmed the chronology established with surface finds and provided well-preserved examples of Late Preclassic material (Appendix C), parts of Protoclassic mammiform tetrapod and solid nubbins supports (Fig. 6.1) (see Brady et al 1998, fig. 3), and a number of Early Classic and Late Classic polychrome sherds (Fig. 6.2). In addition, the chronology derived from ceramic assemblages was supported by the information provided by site layout, architectural features, and construction methods.

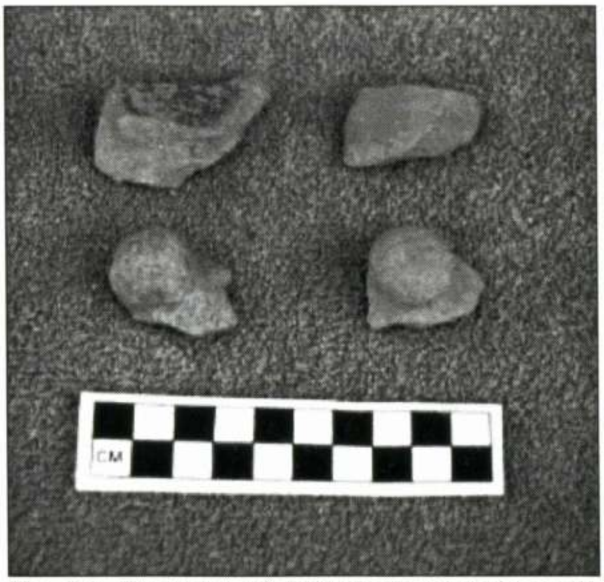


Fig. 6.1. Examples of Protoclassic ceramic vessel supports.

Louisville parallels the chronology of Nohmul, and fits into the regional chronology of northern Belize site that have an early start, peak in the Late Preclassic, show very little occupation in the Early Classic, and have a resurgence in the Late and Terminal Classic (Hammond 1985: 763-764). Some material from the Early and Middle Preclassic, as well as limited Postclassic evidence indicate that Louisville had a very long span of occupation, with some ebb and flow that redirected the focus of the site from the early core, out to more spread apart structures in the Early Classic, and back to the site core in the Late Classic.

Although Gann's collections indicated a Late/Terminal Classic date for Louisville, and Thompson (1928, 1929) and Haberland (1954) reported finding Preclassic material, there had never been a systematic documentation of the entire chronology of occupation until this project.

Other Finds

Although ceramics and architecture were most informative for the purposes of this study, a number of small finds were recovered in both surface collection and excavation that are worth mentioning. Besides the stucco and sherds found in the trench and tespits, ceramic artifacts such as a deer head, parts of whistles, and a net weight were recovered from excavation and surface (Figs. 6.3 and 6.4). Along with the net weight, a small greenstone celt fragment, and drilled mother-of-pearl (*Nephronaias*) beads were found on the surface in the site core.

A number of obsidian blades and chert tools, some of Colha chert, were recovered from surface, from testpit L02, trench L05, and the midden of L07 (Fig. 6.5).

Fragments of a *mano* and a *metate* were collected from Str. 107 outside the site core (Fig. 6.6). A number of other similar fragments were photographed from what remains of the Louisville collection amassed by the landowner at the time of Gann's excavations. The daughters of Mr. Ramirez, who still live in the house built over one of the ancient mounds, no longer have the collection of vessels that was dispersed in 1955 with hurricane Janet; they do, however, have a number of manos of siliceous limestone (Fig. 6.7), a metate of pink granite from the Maya mountains (Fig. 6.8), and a bark beater (Fig. 6.9) all of which came from the fields near the site core.

Architecture

Although Str. 12 at Louisville might have been decorated with a frieze similar to that of Str. A-3 at Seibal (see Willey 1982: 16), the architecture of the building was definitely more like that of Nohmul Str. 17, a long range "palace" or "gallery" type building (Fig. 6.10). There are some strong parallels between the Louisville and Nohmul structures that suggest that contact with, or perhaps even subordination of Louisville to Nohmul, the larger site, might have been the source of the shared

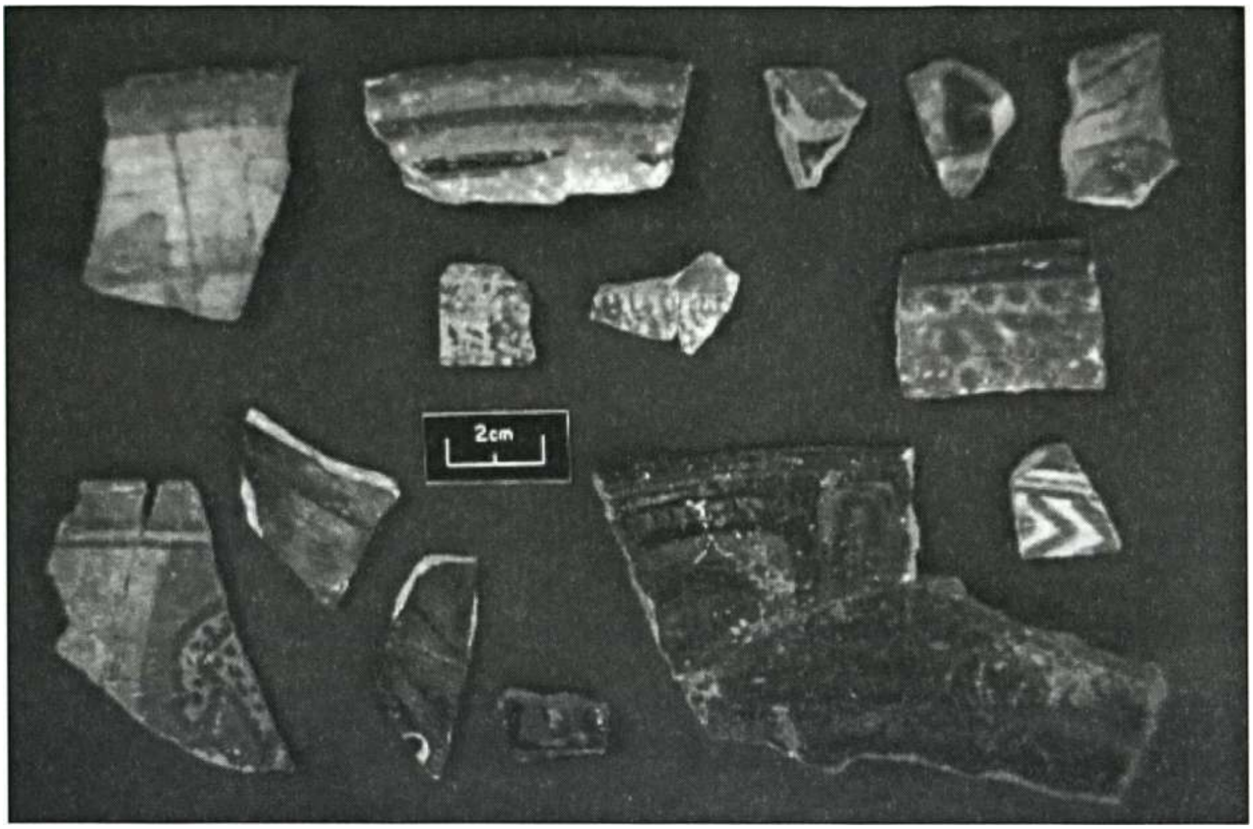


Fig. 6.2. Examples of Early and Late Classic polychrome sherds.

features: both buildings are Late/Terminal Classic, built over a Late Preclassic platform; both have a long and narrow single room with no internal divisions; although not much plaster was preserved in Str. 17 there are indications that the interior was finished with smoothed and painted plaster; the masonry of the piers and doorjambs is identical, and at both structures the back wall construction was rougher than the façade; and both structures were initially built for non-domestic purposes, and were later modified for short-lived residential functions (Hammond et al. 1987: 264-274). Nohmul Str. 17 did have a central back door, later closed in, which we did not find at Louisville, although the total length of Str. 12 is unknown, and we could not precisely identify the central axis. In addition, at Nohmul numerous vault stones were recovered, and, while we know with certainty that Str. 17 was vaulted, we cannot say the same for Louisville Str.12.

Also different is the orientation of the two buildings: Str. 17 faces west and is aligned roughly N-S, while Str. 12 runs E-W and faces directly south. In this respect Louisville fits well with the typical orientation and features common to colonnaded buildings as identified by Driver, which are defined as "gallery-type", and porticoed buildings with either circular columns, square pillars, or piers that comprise more than 50% of the façade length, so that the result is a very open structure suited for public functions (Driver 2002: 65). Four out of six of the colonnaded long-range buildings with an open "flowing" plan analyzed by his study have southward-facing façades.

Another parallel between Louisville and Nohmul is found in the Late Preclassic construction of Str. 18 at the former and Str. 1 at the latter. As suggested in Chapter 5, Louisville seems to have emulated a type of single work program for constructing a large raised platform in relatively short time by building wall sections into separate tasks, such as was identified with Operation A at Nohmul Str. 1 (Fig. 6.11). Both the Louisville and Nohmul pyramids date to the same period and the tasks have the same dimensions (Hammond et al. 1985: 196).

The range of examples of architecture at Louisville also includes two circular structures, one dating to the Preclassic found by Haberland (1958: 129), and one dating to the Early Classic excavated by Sidrys

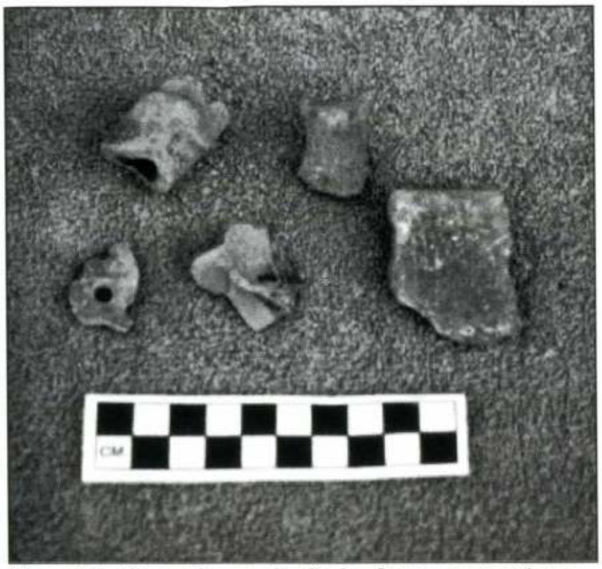


Fig. 6.3. Ceramic small finds from excavations—whistle and figurine fragments, and modeled deer head.

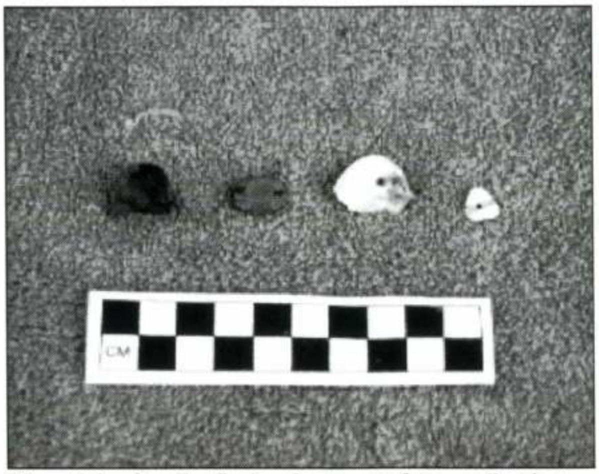


Fig. 6.4. Small finds from surface collection—greenstone celt fragment, ceramic net weight, and *Nephronaias* shell beads.

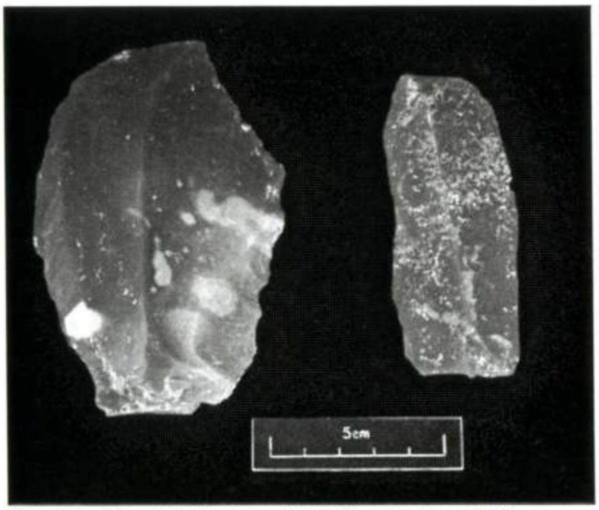


Fig. 6.5. Chert tools from Late Preclassic midden.

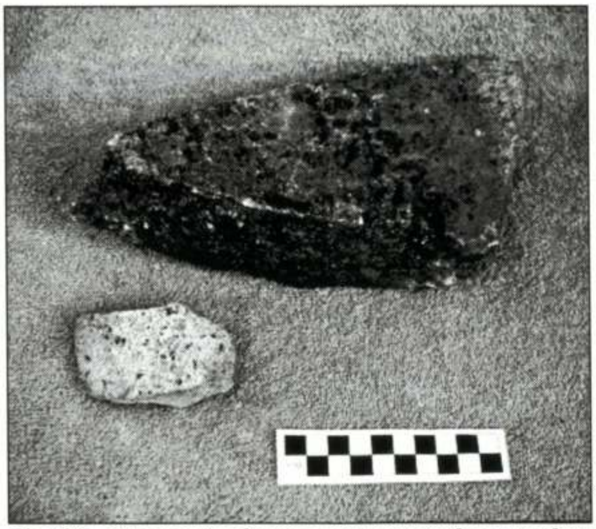


Fig. 6.6. Fragments of mano and metate from surface collection.

(1983: 92-103). No evidence of circular structures was found by this project.

A number of chultunes, found at Louisville in the mapping portion of the project, are worth a mention: there are at least six well-preserved ones, with stone-lined openings and capping stones, and four of these are located by mounds in residential areas. Two are apparently placed some distance from the nearest mound, and it is likely that there are many others that were missed because obscured by growing cane.

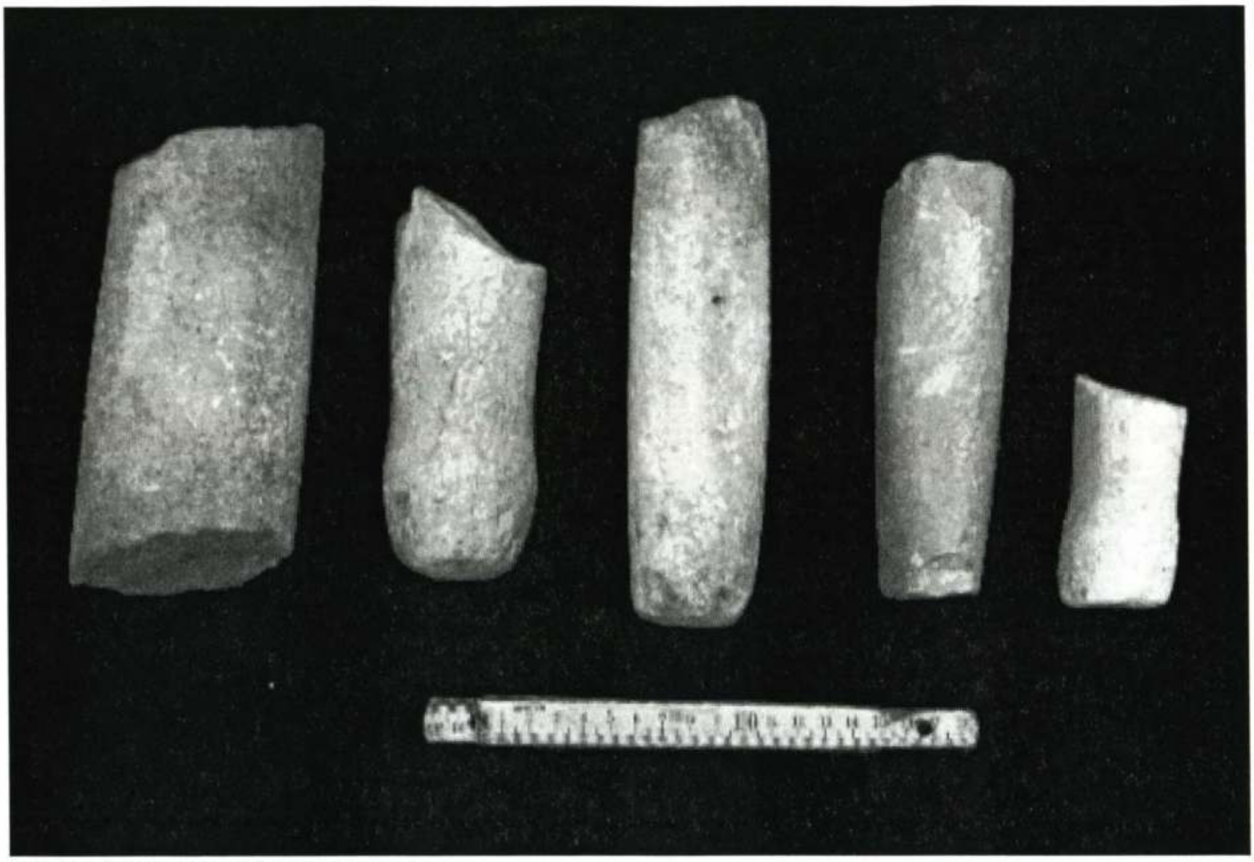


Fig. 6.7. Fragments of limestone manos.
Scale is 20 cm.

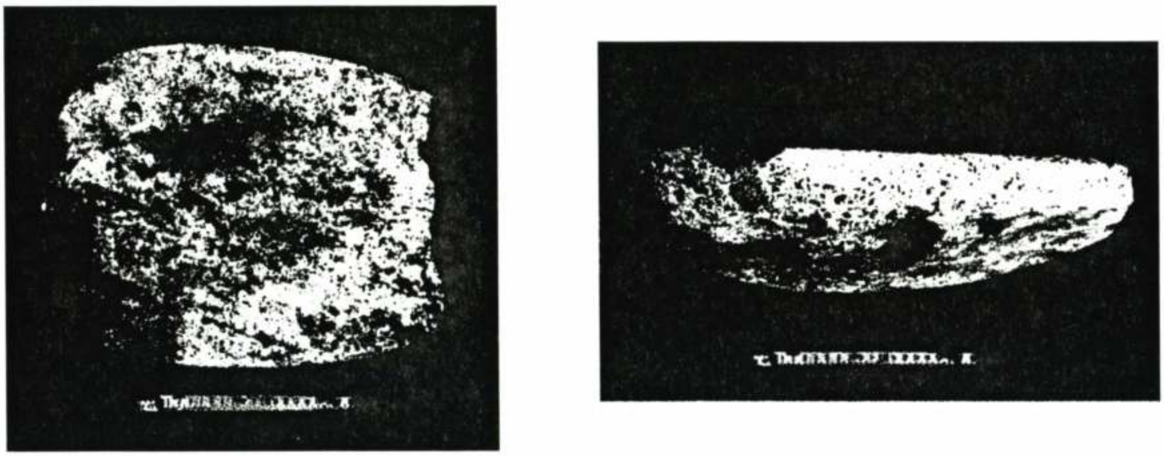


Fig. 6.8. Pink granite metate, front and side views.
Scale is 20 cm.

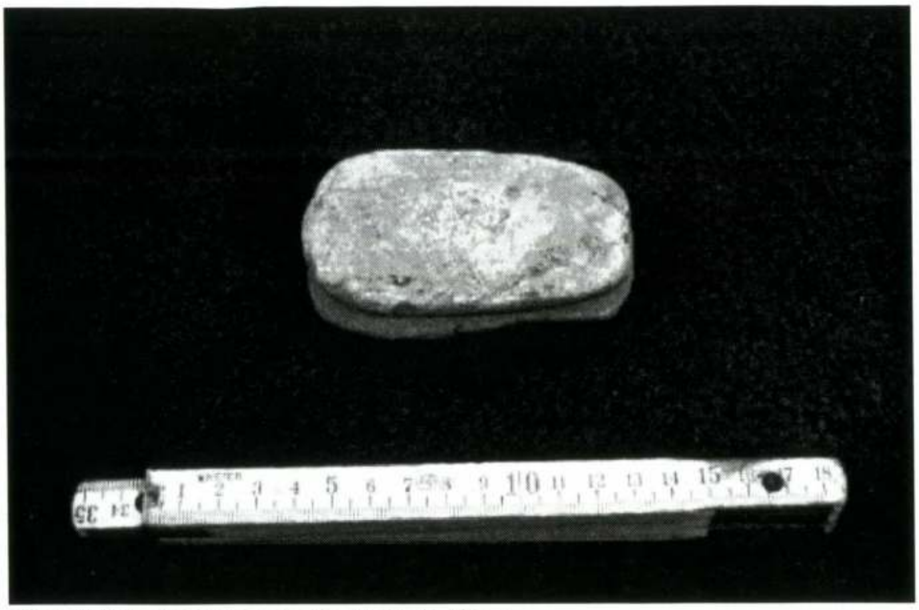


Fig. 6.9. Limestone bark beater. Scale is 20 cm.

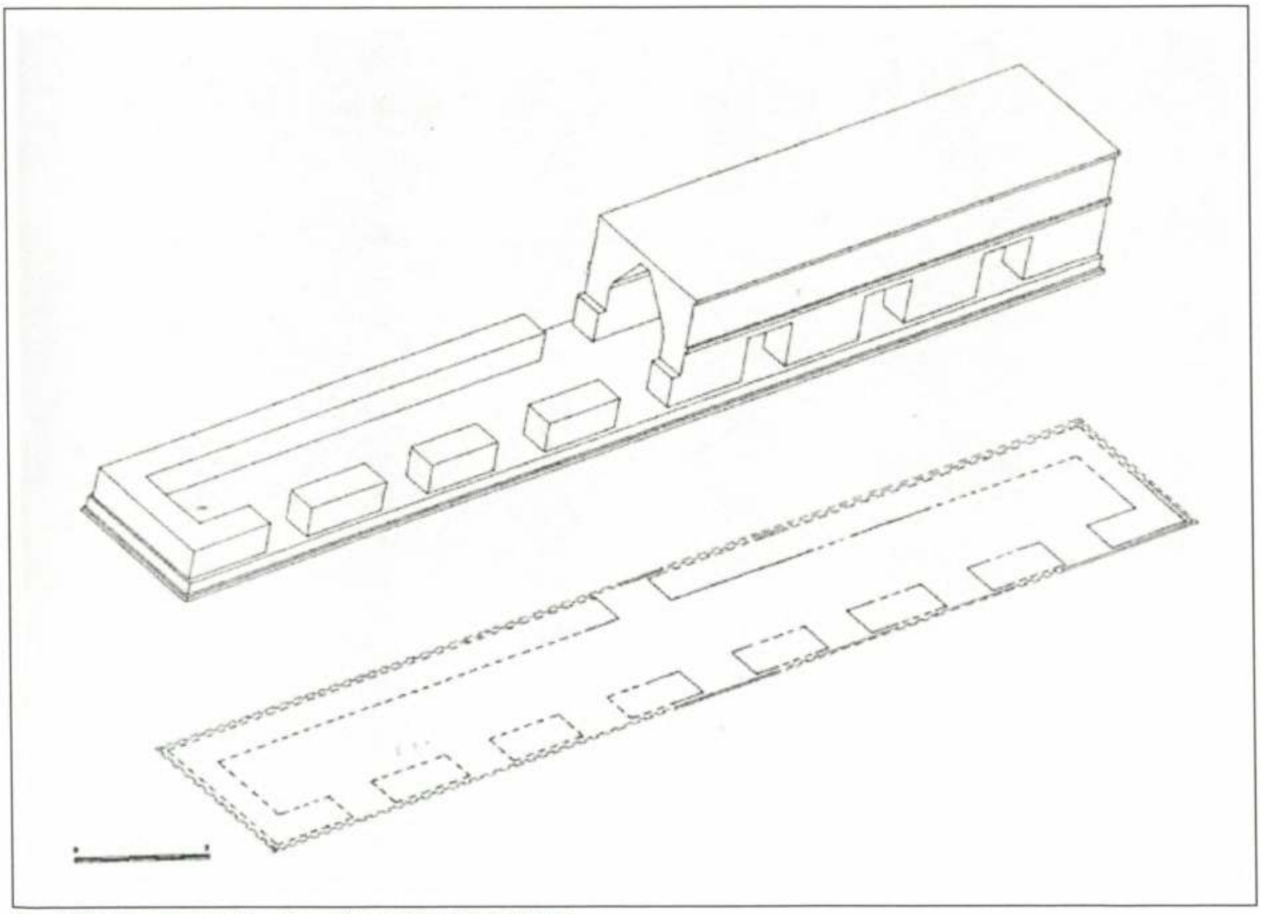


Fig. 6.10. Reconstruction drawing of Str. 17, Nohmul (Hammond et al. 1987: 273; used with permission).

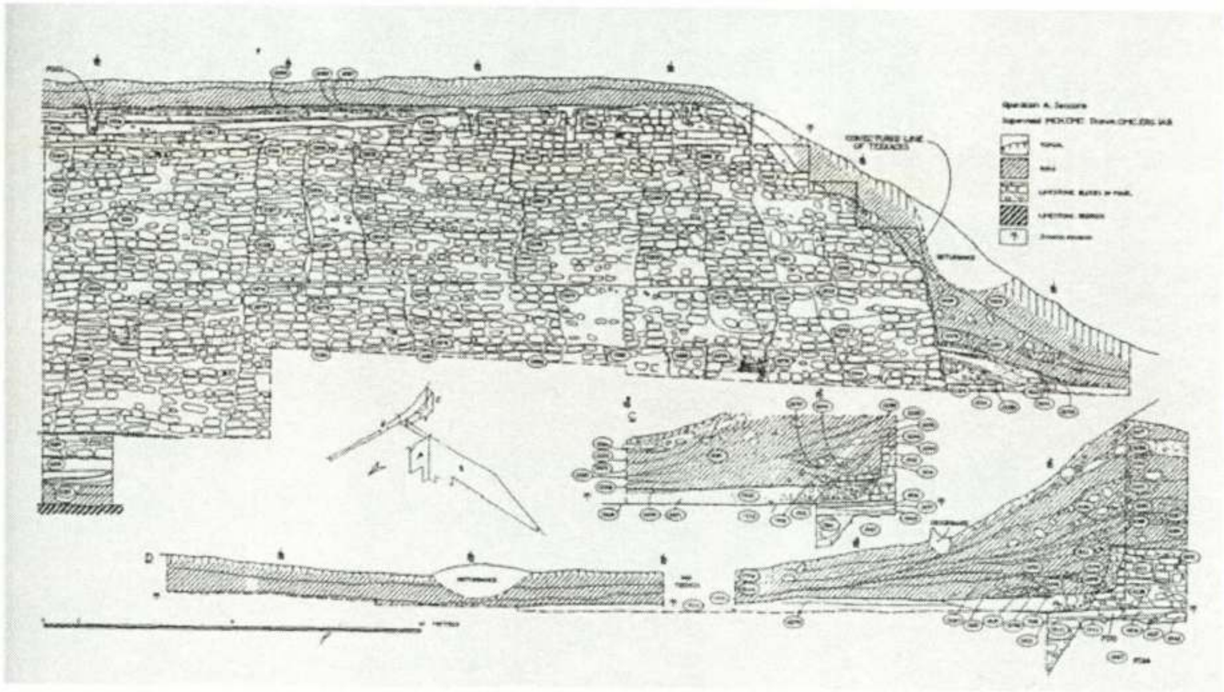


Fig. 6.11. Task construction, Structure 1, Nohmul (Hammond et al. 1985: 195; used with permission).

Evaluation of the Stucco Finds

The excavations conducted at Louisville in 2000 and 2002 recovered large quantities of architectural plaster, much of it painted, and a few fragments of modeled stucco. In conjunction with other lines of evidence the Late/Terminal Classic building labeled Str. 12 was identified as the location of Gann's excavation of 1935-36 whence the British Museum and Tulane University collections of stucco heads and fragments came to light.

Although there are no direct parallels for sheer number of stucco human portraits from a single building at any other Maya site, Seibal Str. A-3 gives a picture of what a stuccoed frieze might have been like. Nevertheless, there is no shortage of stucco sculpture at Maya sites from all regions. Limited preservation potential is the reason stucco is seldom found, but the absence of evidence certainly does not indicate that the Maya did not use stucco sculpture profusely. When it is recovered it is usually in limited quantities, and, when published, often in sections of miscellaneous finds. In fact, when collected together, those mentions create a corpus of at least twenty-seven sites where stucco human portraits have been found.

Table 6.1 catalogs Louisville and other sites where stucco heads have come to light. The variety of forms reflected in the same medium suggests that the sculptures do in fact portray, along with regional variations, the idiosyncratic features of individual men and women: I believe this form of sculpture is indeed portraiture. When considering just the Palenque heads, without the rest of the corpus from other sites, it may seem that these were "too much of an archetype" and that Maya sculptors "had not reached the point of true portraiture" achieved by several other ancient cultures (Griffin 1976: 141). By collecting together the references to most stucco portraits found to date in the greater Maya area, it is possible to see that the panorama of Maya sculpture is more varied and sophisticated than Griffin believed.

Table 6.1 lists sites roughly in geographical order, beginning with Louisville and Pueblo Nuevo, followed by other sites in Belize, then Guatemala, and finally Mexico, with sites in the central and northern Yucatan peninsula last. Of the human heads listed all are made of stucco, those that are dated are Late and Terminal Classic, and just over half of the corpus comes from sites in the Rio Bec, Chenes, and Puuc regions. The Rio Bec and Chenes sites have some of the earliest material, while the Puuc sites are late; it is possible that the tradition of human stucco portraits stems from the former regions at the onset of the Late Classic, and spreads outward to other sites, north into the Puuc, southwest into Chiapas and Guatemala, and south into northern Belize. The influences from the north, seen in Chapter 5 with some of the late ceramics at Louisville, might be reflected in the frieze program of the stuccoed building at Str. 12.

Table 6.1. Tabulation of stucco human portrait heads from the Maya region.

	Site Name	Stucco Portraiture	Illustration References	Notes
1	Louisville Belize	39 human, 2 god, 1 monkey head, 2 torsos	Gann 1939, 1943; present work	Structure 12
2	Pueblo Nuevo Belize	3 human heads, 2 torsos	Gann 1918, 1926; present work	
3	Lamanai Belize	9 human, 4 god	Pendergast 1985; Shelby 2001	Very similar to Seibal Str. A-3; (Fig. 6.12)
4	San Jose Belize	1 human eye, fragments	Thompson 1939	Fragments of "maize" like Seibal, eye could be relief, not full round
5	Caracol Belize	At least 1 human head and shoulders	Held at Caracol field lab, not published; Houston 1987	Very similar to Pueblo Nuevo (Gann 1918, fig. 65)
6	Seibal Guatemala	11 human, 2 "god", 2 monkey heads	Willey 1982	Structure A-3
7	Cancuen Guatemala	1 human head, fragments of possibly 10 other	Barrientos, Larios Villalta, and Luin 2003	Structure L7-9, Palace; larger than life-size, comparable to Seibal heads
8	Piedras Negras Guatemala	2 human heads	University of Pennsylvania 1933, 1934	Larger than life-size,Structure R-5; (Fig. 6.13)
9	Tikal Guatemala	1 human head	Laporte and Fialko 1990	Mundo Perdido
10	Naachtun Guatemala	1 human head	Schmidt, de la Garza, and Nalda 1998	Very similar to Louisville, and Manos Rojas Camp; (Fig. 6.14)
11	Palenque Mexico	2 "Sarcophagus heads", 1 Temple XIV head, many fragments (human and god)	Robertson 1983; Schele and Mathews 1979	Finely modeled portraiture, sarcophagus heads not painted
12	Tonina Mexico	6 human heads, 3 skulls, 2 god/supernatural heads	Yadeun 1992; 1993	From roof-comb decoration; human heads similar to Louisville, and Seibal; god heads similar to Seibal
13	Comalcalco Mexico	2 human heads	Schmidt, de la Garza, and Nalda 1998	Shell plaster, mask-like with hollow eye sockets; (Fig. 6.15)
14	Margarita Maza de Juarez Mexico	1 human head	Excavated by Peter Harrison (personal communication 2001), not published	
15	Becan Mexico	2 human bodies, 3 monkey heads, fragments	Potter 1977	1 headless body, monkeys with god eyes, fragments like Seibal "maize"; (Fig. 6.16)
16	Chicanna Mexico	2 human heads	Potter 1977	1 human head with simian features

17	Xpuhil Mexico	Fragments, human body parts	Potter 1977	1 hand like Louisville torso and hand
18	Manos Rojas Camp Mexico	1 human head	Merida Museum, not published	Painted red like Louisville and Naachtun heads; (Fig. 6.17)
19	Okolhuitz Mexico	1 human head	Ruppert and Denison 1943	Head with *tau*-shaped front teeth; (Fig. 6.18)
20	Uxmal Mexico	2 human heads	Gann 1924	Elaborately painted, buried under floor of the House of the Governor; (Fig. 6.19)
21	Ek Balam Mexico	2 human bodies, various naturalistic and supernatural details	Grube 2001	Modeled stucco façade with human beings detailing large architectural mask
22	Kabah Mexico	1 human head	Gann 1939	Mentioned, not illustrated, said to be at Merida Museum
23	Oxkintok Mexico	1 human head	Rivera Dorado 1996	
24	Xcalumkin Mexico	1 human head	Pollock 1980	Blue paint on headdress
25	Xculoc Mexico	1 human figure	Maler 1902	Said to be above central door of building east of the Palace
26	Labna Mexico	Feather headdress in Portal Vault niche	Kowalski 1985	Only traces of stucco headdress suggest figure, could be stone or stucco
27	Dzibilchaltun Mexico	1 human thumb, various fragments	Coggins 1983	Could have been full round or low-relief
28	Unprovenienced	1 human head	Schmidt, de la Garza, and Nalda 1998	Very similar to Louisville BM38-10.21.333 with medallion in headdress and face painted red; (Fig. 6.20)

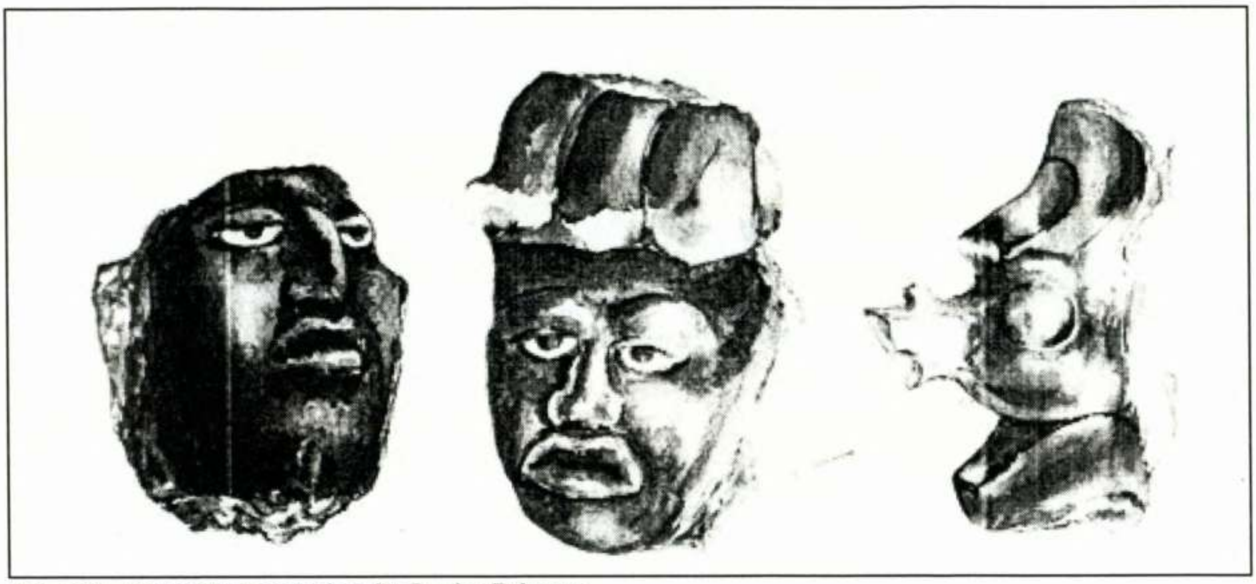


Fig. 6.12. Watercolor rendering, by Louise Belanger, of two human and one god stucco heads from Lamanai (used with permission of the artist).

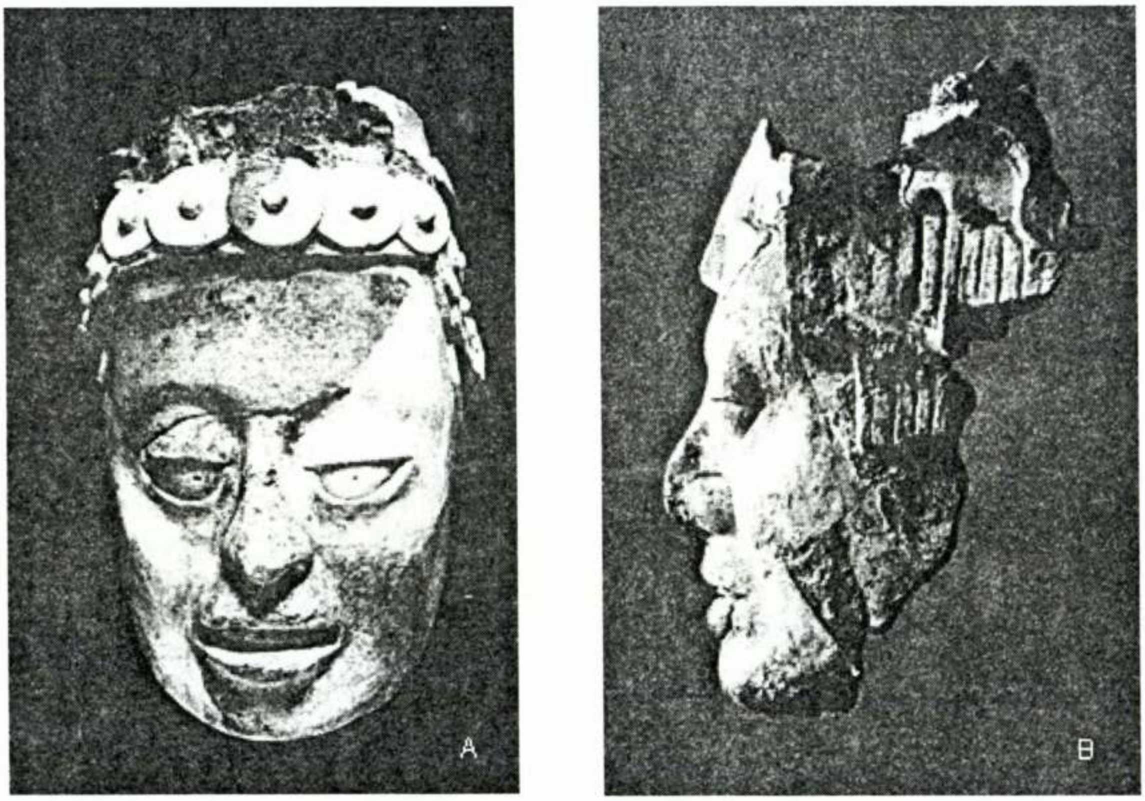


Fig. 6.13. Stucco heads from R-5, Piedras Negras:
a) after University of Pennsylvania 1934, plate I;
b) after University of Pennsylvania 1933, plate XI.

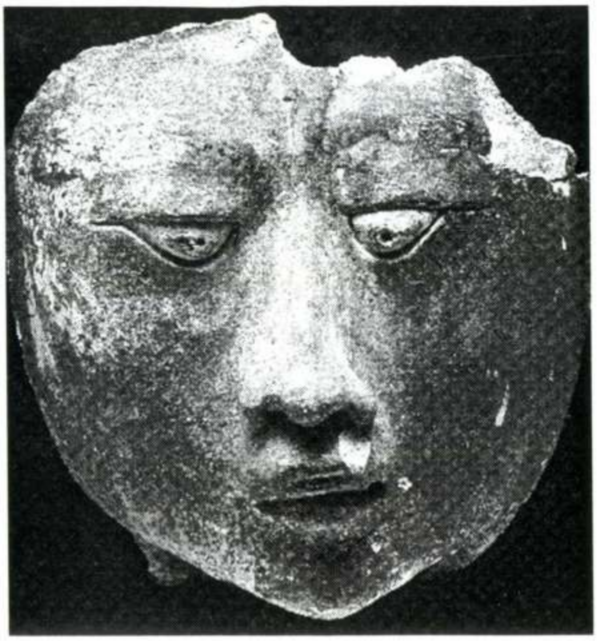


Fig. 6.14. Stucco head from Naachtun (after Schmidt, de la Garza, and Nalda 1998: 534).

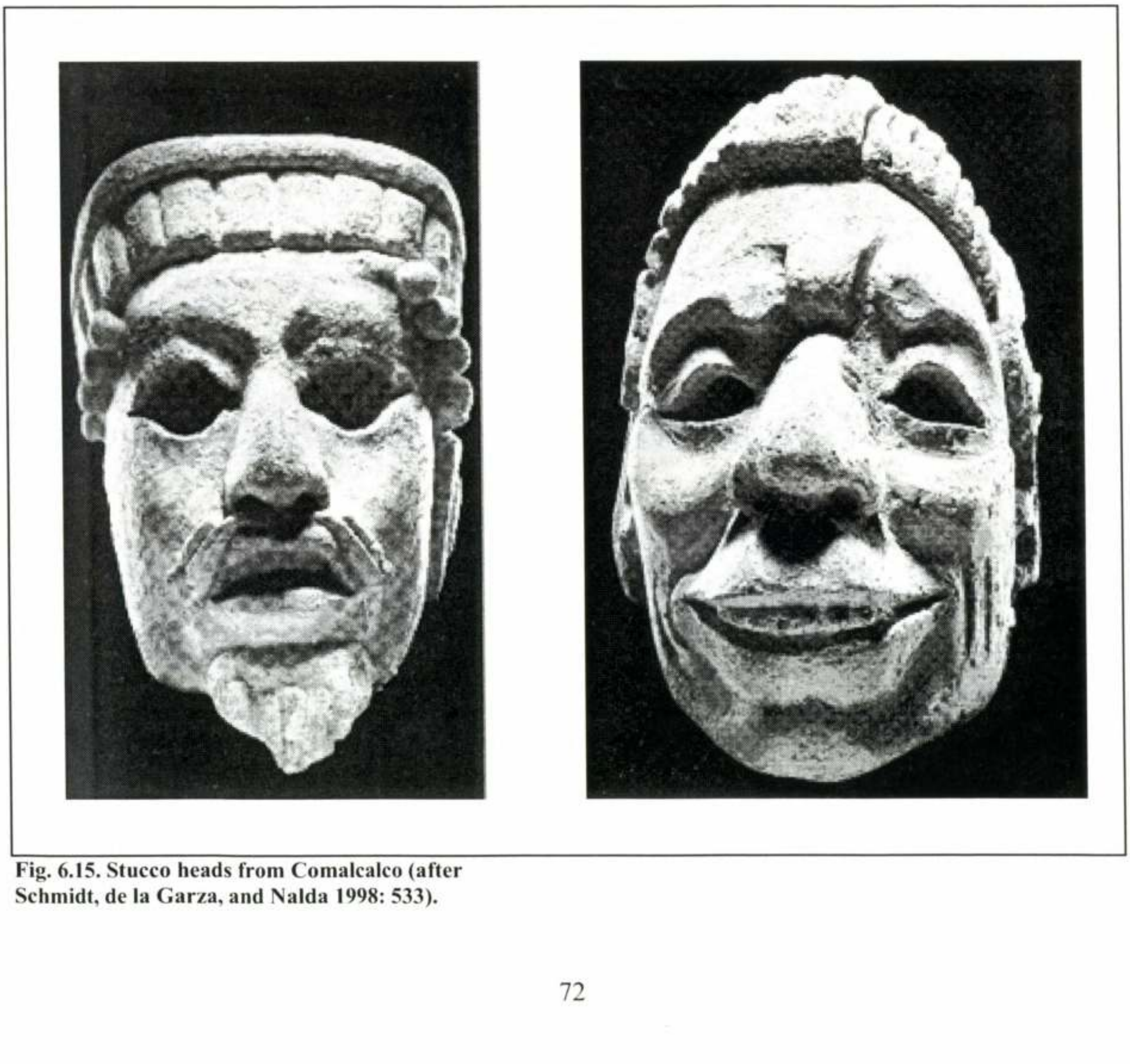


Fig. 6.15. Stucco heads from Comalcalco (after Schmidt, de la Garza, and Nalda 1998: 533).

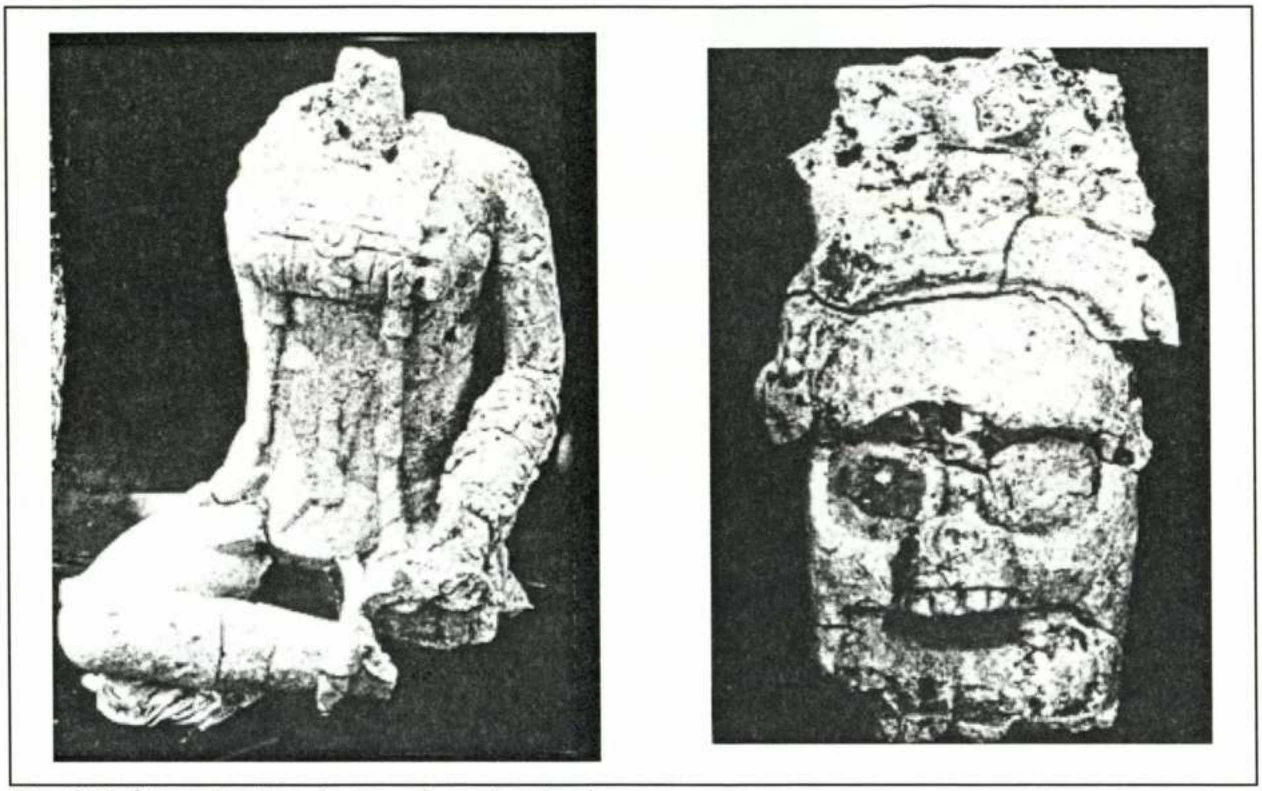


Fig. 6.16. Stucco headless body, and monkey head from Becan (after Potter 1977: 33-34).

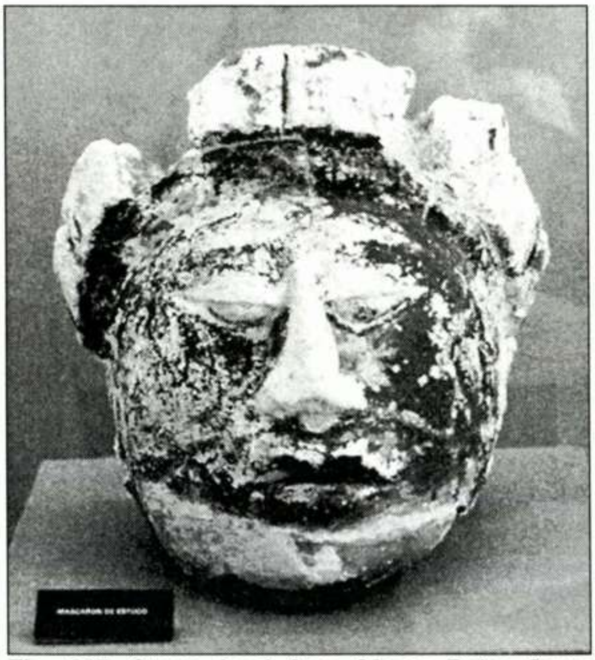


Fig. 6.17. Stucco head from Manos Rojas Camp (photographed in the Merida Museum, Mexico).

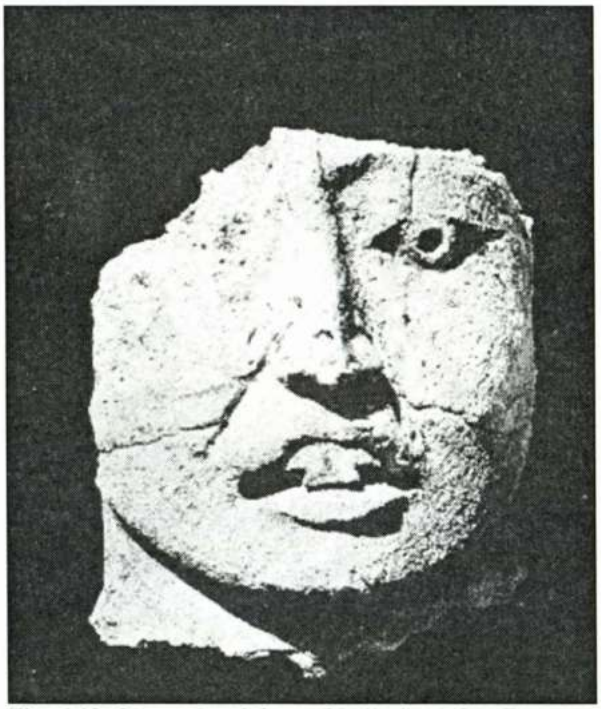


Fig. 6.18. Stucco head from Okolhuitz (after Ruppert and Denison 1943, plate 35).

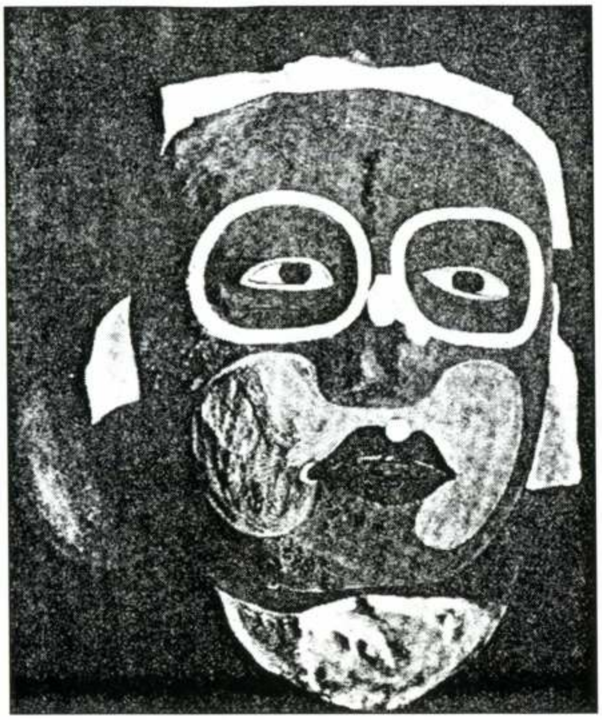


Fig. 6.19. Stucco head from the House of the Governor, Uxmal (after Gann 1924; frontispiece).

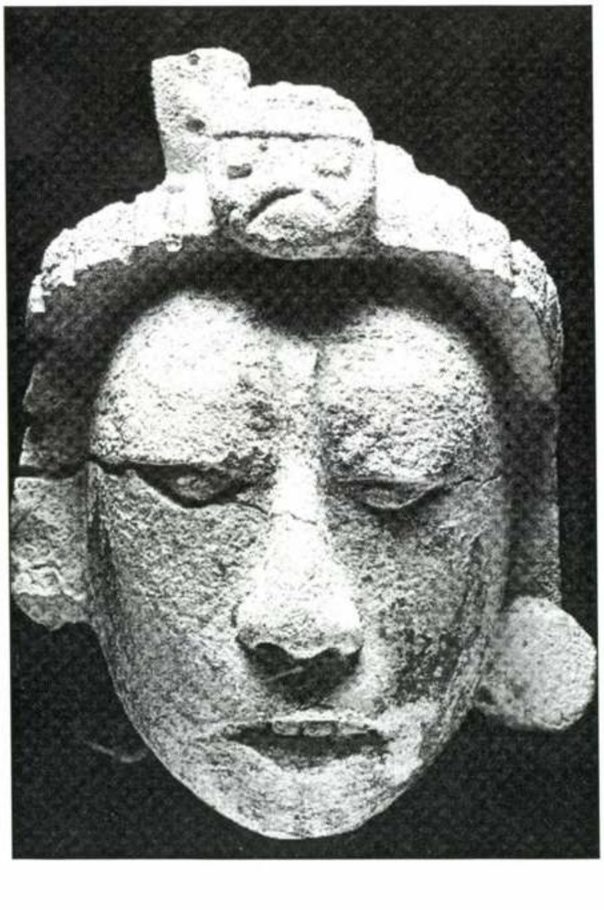


Fig. 6.20. Stucco head of unknown provenience (after Schmidt, de la Garza, and Nalda 1998: 533).

It is unfortunate that Gann's publications are not widely read for scholarly research. Perhaps the popularizing style and narrative contents of most of his writings deter researchers from reading his books for content and information on Maya sites. In this way, however, some of the information that has been published has been relegated to obscurity for most of a century; that has been the fate of the Louisville collection of stucco heads.

The fact that few are aware of the existence of these collections may also have contributed to the lack of systematic reporting of similar stucco heads found in limited quantities, but at numerous sites. They may seem miscellaneous finds, but when they are related to the finds at other sites it is easy to see that they belong to a large corpus, and that Maya buildings everywhere must have been more elaborately decorated than is commonly perceived. An assembled corpus of such data would also be useful in research on the material composition of stucco sculpture; there is some available data on the subject (Littman 1957, 1958, 1959, 1960, 1966; Hansen 2000), but Maya lime products need to be further studied, and these stucco portraits offer an interesting dataset.

The heads from Louisville and other sites may at first appear to be variations on the same stylized face. However, an outsider does not have the means to distinguish what might have been considered a standardized feature from what were individual characteristics of the people of Louisville; a Maya of the Late Classic may have immediately recognized portraiture in the nature of these sculptures. The issue of gender in particular is difficult to address, even with elements of attire ad hairstyle; without the latter the faces alone would be almost indistinguishable.

The Louisville heads seem to fall roughly into two groups: one with round faces, receding chins, and wide noses, and the second with longer, narrow faces, and curved noses. These two categories may reflect two groups of people, or perhaps the hands of two different artists or artist schools; the heads that have similar features vary in expressions, and some with similar expressions have different features. This suggests that they do reflect individual characteristics, although they may have been created from a repertoire of forms.

In summary, this project set out to recover the context of a collection of remarkable sculptures, with the hope that once they are reinserted into the corpus of knowledge of Maya arts and techniques, they will be taken into consideration when other similar artifacts are excavated elsewhere, and that other excavation reports will include mention of any such finds. It is my impression that human portraiture and stucco sculpture was far more widespread than is currently believed; the fact that polychrome stucco sculptures have been found at a small settlement such as Louisville is not an indication that Louisville was more important than we think, but rather that this art form was more common than we think.

Appendix A

The following is the *verbatim* text of the report prepared by Gann after working at Louisville. Submitted in 1936 to *Maya Research*, it was not published until 1943, when the journal, edited by Robert Wauchope, was renamed *Middle American Research Records*. The 1943 publication reflects all the editorial changes; this appendix provides the text as submitted by Gann, from the archives at Tulane University, courtesy of E. Wyllys Andrews V.

A Maya Portrait-Gallery
By Thomas Gann

During the winter of 1935-6 excavation was carried out by my wife and myself in a group of mounds situated about 12 miles south west of Corozal, in the north of British Honduras.

Seven of these mounds surrounded a rectangular court or plaza, six of which were found to have been constructed over the ruins of stone buildings or temples.

One of these, forming the south west boundary of the plaza was exceptionally interesting, as the north wall of the temple over which it was built had been covered with painted moulded stucco, a considerable amount of which was recovered. The mound measured 90 feet from east to west, 75 from north to south, and 15 in height.

The north wall of the temple which it covered was 34 feet in length, and in its center a doorway four feet wide opened on the plaza; the west wall measured 21 feet. Both these walls still stood to a height of from 3 to six feet. The south and east walls had been completely destroyed. The temple stood on a low substructure, and had evidently been roofed by wooden beams, as the span was too wide for the cantilever arch and no roofing-stones were found. The interior had been covered by a layer of smooth yellow stucco, with elaborate claret-coloured mouldings in the same material.

The entire temple had been filled in with blocks of limestone, rubble, and stones and stucco taken from the ruins of the south and west walls. The whole structure was then enlarged by the addition of limestone boulders and rubble on all sides of it, to the height of the temple ruins. Over the flat surface thus formed a floor of stucco was placed, probably for the support of a second temple built of some perishable material, such as wood or adobe. Later this floor was covered by a layer of rubble and marl dust, over which a second stucco floor was constructed, and above this, at a still later period, was placed a third layer of rubble topped by a third stucco floor.

The mound consequently shows four periods of construction. First the stone temple, later filled in and extended laterally to form a stucco-floored substructure, over which two further layers of rubble covered by stucco floors were later constructed. These occupational periods may not have been separated by long intervals of time; in the case of the three last additions, possibly not amounting to more than a few years.

The first discovery was made at the north west corner of the mound where two life-size stucco heads were brought to light. They were beautifully modeled, painted red and blue, and one was evidently that of a man, the other of a woman. With them was a life-size torso, badly damaged, an innumerable fragments of painted stucco ornamental mouldings. During the progress of excavation along the north side of the mound forty-one life-size stucco faces and two torsos were discovered. The wreckers of the temple had evidently gone to considerable trouble to preserve he heads, as they were all placed face-downward in the marl dust and not mutilated more than was absolutely necessary in detaching them from the walls, whereas the stucco mouldings were broken into small pieces and used merely to fill in the later substructure.

The heads originally were all colored dark red with parts of the headdresses—usually horse-shoe shaped, worn with the convexity of the shoe over the forehead—picked out in a light blue. In one case a woman wore her hair brushed back over her forehead, puffed out in the shape of a bolster, and held in place above by a fillet. Her face was decorated by purple lines across the forehead and under the eyes, and circular spots of the same color on each cheek, probably the type of face-painting she had used during life.

The heads may be divided into three groups. The first is typical of the Maya of the Old Empire as found at Palenque, with receding chin and forehead, full lips, and prominent Semitic nose. In the second, faces of oval contour are seen with straight Grecian noses, small mouths, drooping slightly at the corners, and rounded, rather receding chins. In the third type, the face is broad and full, and often asymmetrical, the features are coarse, and the individuals who are all male probably belong to the slave class.

All the heads appear to have been attached to the north wall of the temple, at each end of which stood a life-size human figure in high relief.

The heads of Tlaloc, and the Long-Nosed God, also adorned the wall, with the sign of the Maya day AHAU, accompanied by the coefficient 5 in the form of one bar, which may serve to date the first temple.

That the faces are portraits drawn from life is certain, for many of them possess little personal characteristics and idiosyncracies [sic], such as wide flaring nostrils, marked want of symmetry between the two sides of the face, very thick lips, etc., which could not otherwise be accounted for. One of the heads is that of a little old woman with sunken wrinkled cheeks and atrophied lower jaw, from which project her two remaining teeth, so true to nature that it cannot but have been drawn from life. Another is that of a crying child, its mouth drawn to one side, and evidently very distressed.

This discovery appears to be of considerable importance archaeologically as it furnishes us with a sculpture gallery exhibiting the portraits of men, women, and children who lived and went about their several occupations at this site, when the plaza and temples enclosing it formed the religious center for a large population of agriculturalists throughout the surrounding fertile country. Judging from the evidence afforded by the contents of graves in a great necropolis now being excavated in the same district as the temple-mound, it would appear that the latter dates from the end of the ninth, or the early tenth Bactun, or between the 8th and 9th centuries A.D., while the floors erected over its ruins belong to the Maya Reoccupational Period, which lasted up to, and even beyond the Conquest.

The purpose of this unique method of temple adornment is obscure. At two other localities similar heads have been found; the first at Pueblo Nuevo, not far from the present site, from whence came 2 life-size stucco heads, now in the British Museum; the second at Kaba, a city in Yucatan, where a single similar head, now in the Merida Museum, was discovered.

Four possible explanations present themselves:

1. The temple may have been a portrait gallery of prominent contemporary individuals, but against this theory is the fact that the majority are the faces of quite young people and that a large proportion are of women.
2. It may have been a memorial temple in which were preserved the portraits of the dead, and Landa states that the Maya of Yucatan were in the habit of keeping in their temples the heads of prominent men, moulded in some plastic material over their fleshless skulls.
3. The third possibility is that the faces may have been death-masks of victims offered to the Gods to whom the temple was dedicated, probably Tlaloc and the Long-Nosed God, whose images also appeared upon it.
4. Lastly, they may have been the death masks of victims sacrificed on the death of some ruler or high priest, a practice, as we know, common amongst the Aztecs, but rare amongst the Maya. Some probability is lent to this theory by the discovery at the necropolis already referred to of rows of skulls forming a layer across the centre of one of the great burial-vaults, which contained the skeleton and personal belongings of some individual who, judging by the richness of his grave-furniture, must have been of great importance during life.

Appendix B

The following figures illustrate the collections of Louisville stuccoes, both heads and other fragments, as well as some from Pueblo Nuevo, housed at the British Museum and Tulane University. Photographs of the heads, possible glyphs, torso, and fragments are included in this appendix in color and accompany the line drawings and descriptions of the catalog entries in Chapter 4 to emphasize elements and features described in the text. When available, photographs of both front and side views have been included.

Figures B-1 through B-22b are objects in the British Museum from Louisville and Pueblo Nuevo; subsequent Figures B-23 through B-40 are from Louisville only, held at Tulane University. Scales have been drawn onto the photographs and represent 10 cm segments for all British Museum holdings; a 10 cm line also accompanies the line drawings in Chapter 4. Scales for the Tulane University collection are 5 cm segments. All photographs courtesy of Norman Hammond, used by permission of the Trustees of the British Museum, and the Middle American Research Institute, Tulane University.

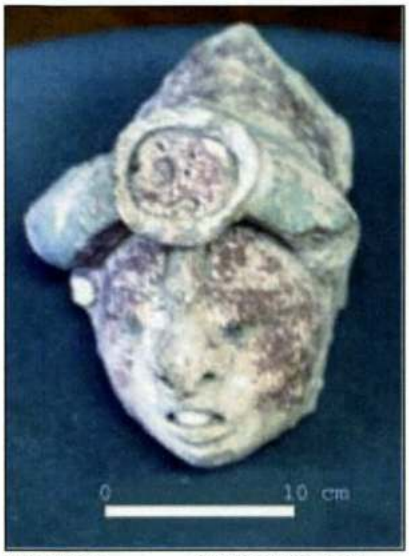


Fig. B-1a. **BM38-10.21.333.**
Front view.

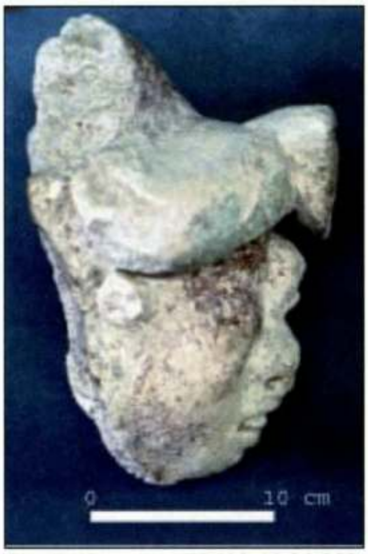


Fig. B-1b. **BM38-10.21.333.**
Side view.

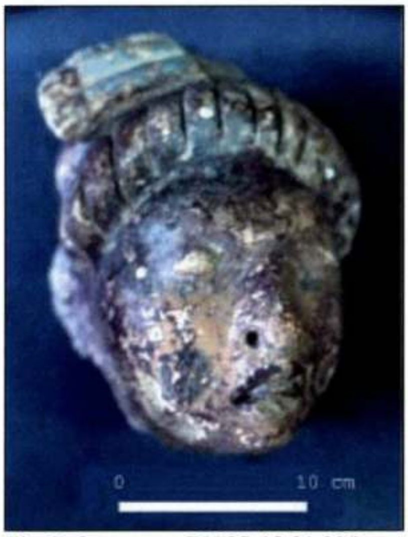


Fig. B-2. **BM38-10.21.395.**

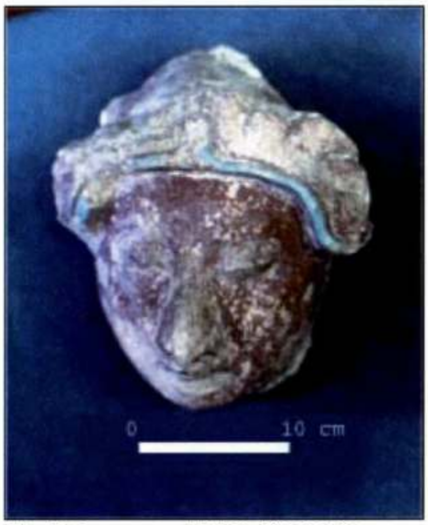


Fig. B-3. **BM38-10.21.396.**

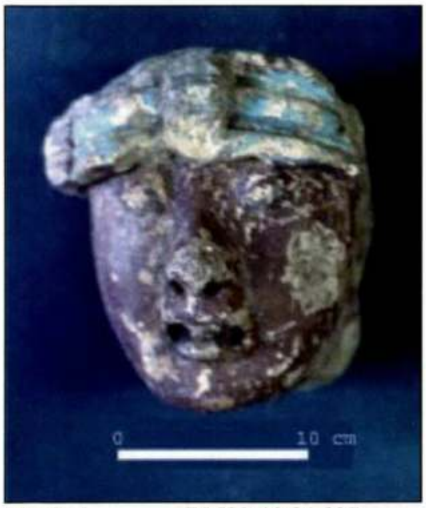


Fig. B-4. **BM30-10.21.397.**

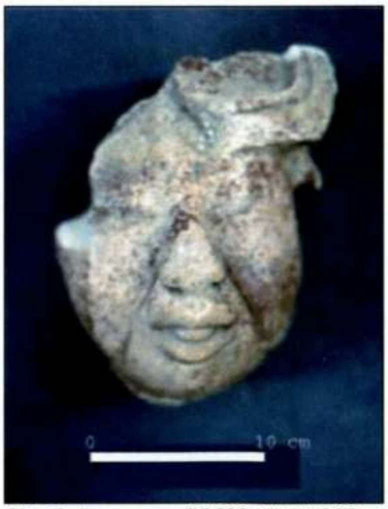


Fig. B-5. **BM38-10.21.398.**

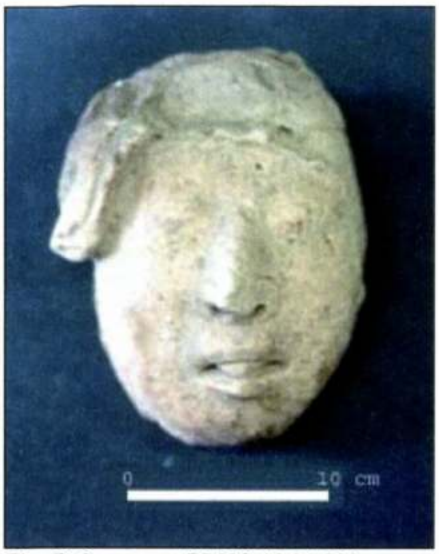


Fig. B-6. **BM38-10.21.399.**

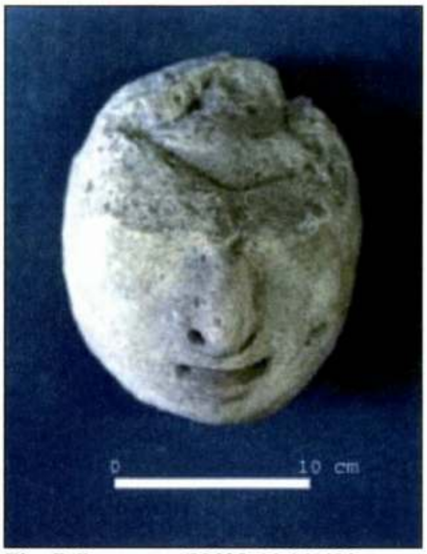


Fig. B-7. **BM38-10.21.400.**

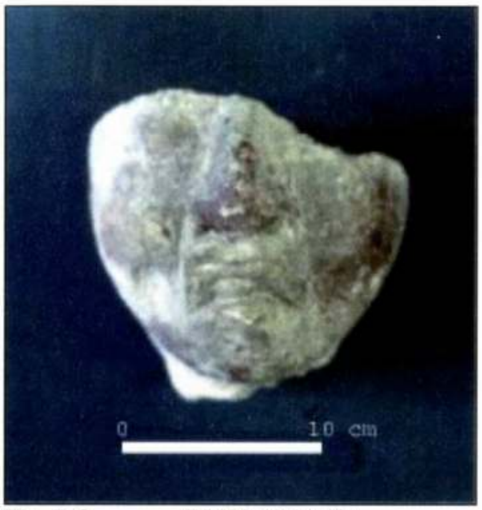


Fig. B-8. **BM38-10.21.401.**

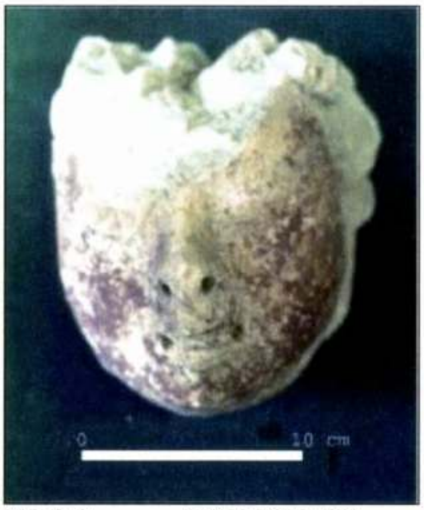


Fig. B-9. **BM38-10.21.404.**

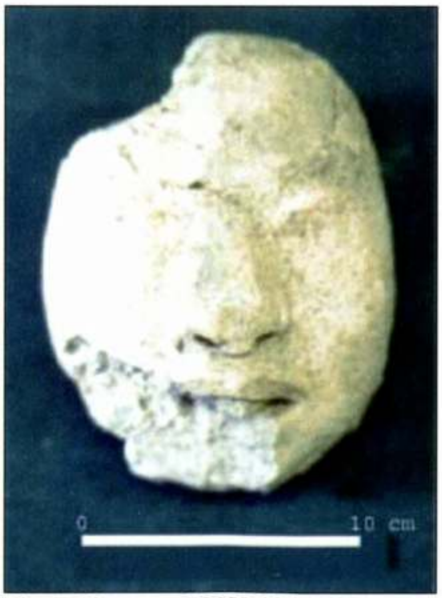


Fig. B-10. **BM38-10.21.405.**

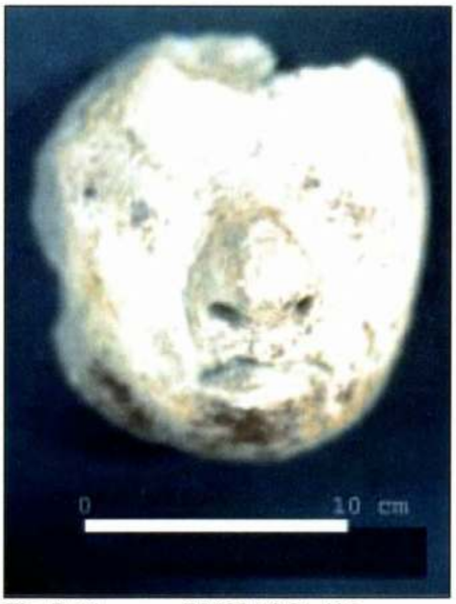


Fig. B-11. **BM38-10.21.406.**

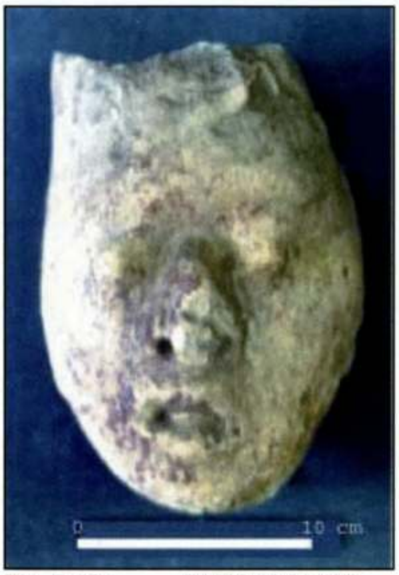


Fig. B-12a. BM38-10.21.407.
Front view.

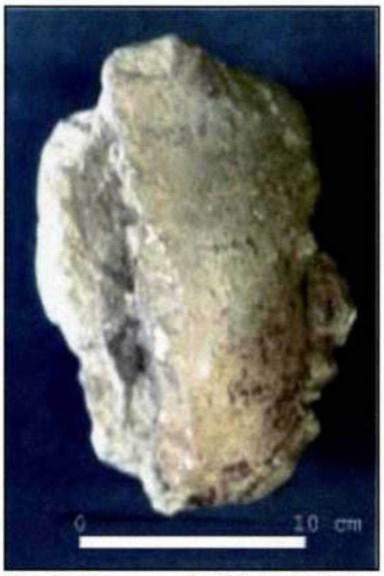


Fig. B-12b. BM38-10.21.407.
Side view.

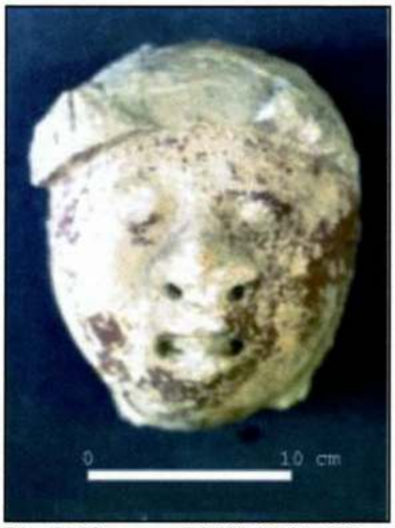


Fig. B-13. BM30-10.21.488.

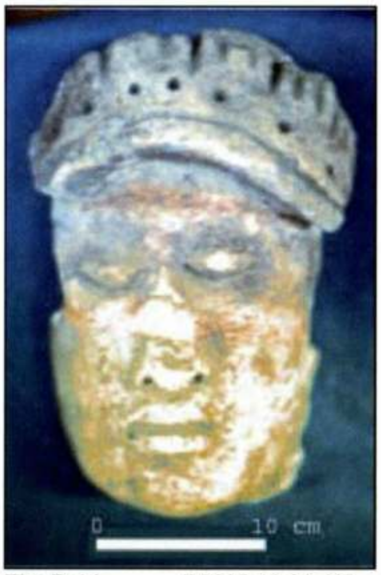


Fig. B-14. BM38-10.21.409.

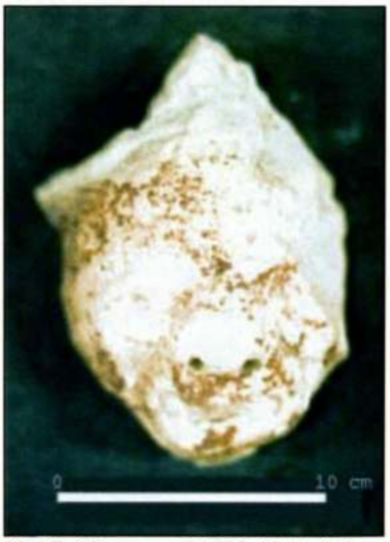


Fig. B-15. BM38-10.21.410.

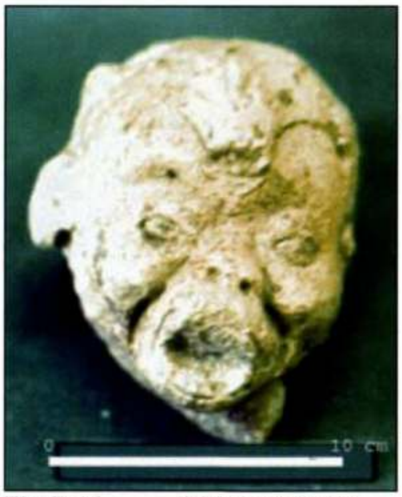


Fig. B-16. BM38-10.21.411.

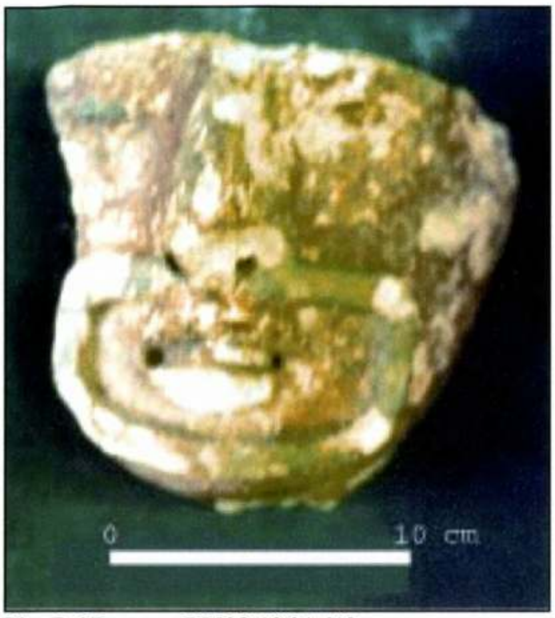


Fig. B-17. BM38-10.21.412.

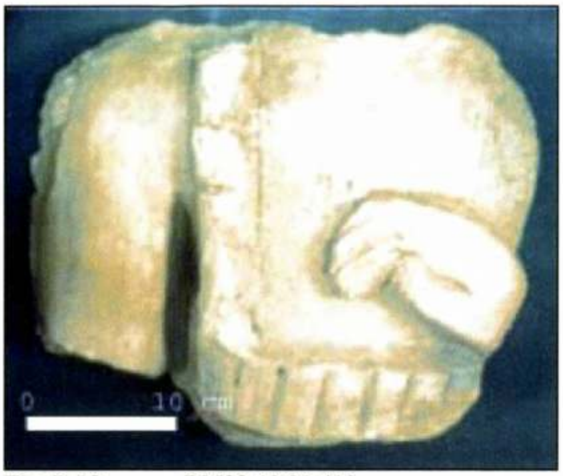


Fig. B-18. BM38-10.21.413.

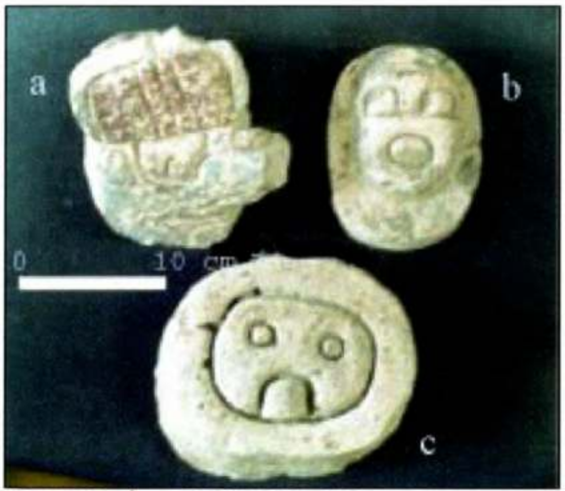


Fig. B-19a. BM38-10.21.403.
Fig. B-19b. BM38-10.21.402.
Fig. B-19c. BM38-10.21.394.

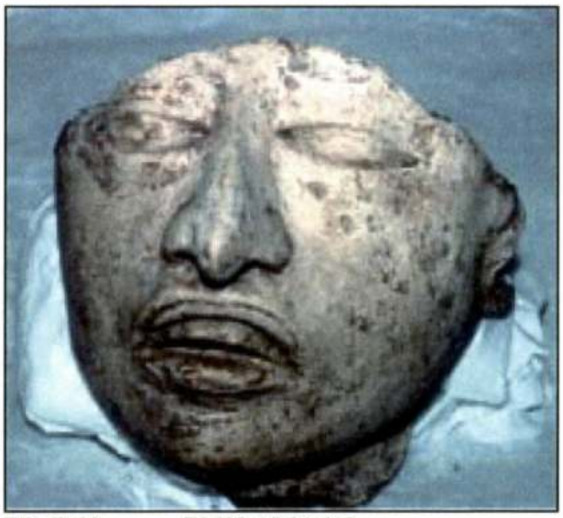


Fig. B-20. BM38-10.21.415.

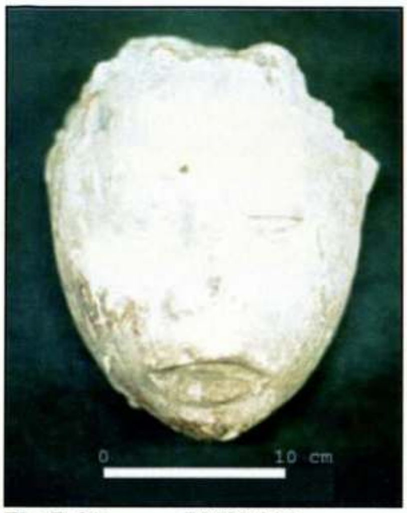


Fig. B-21a. **BM99-206.**
Front view.

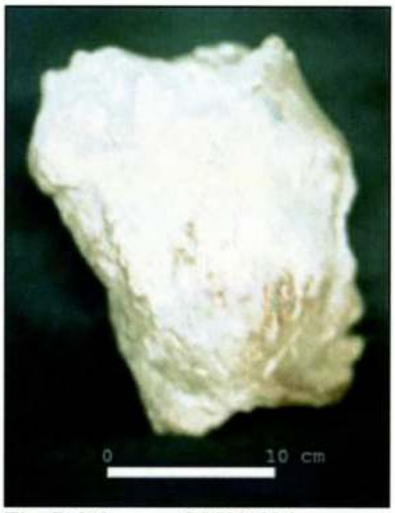


Fig. B-21b. **BM99-206.**
Side view.

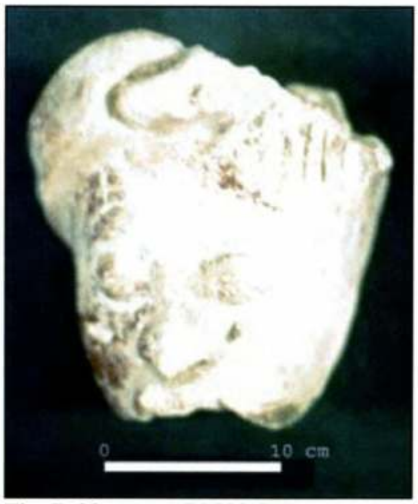


Fig. B-22a. **BM99-207.**
Front view.

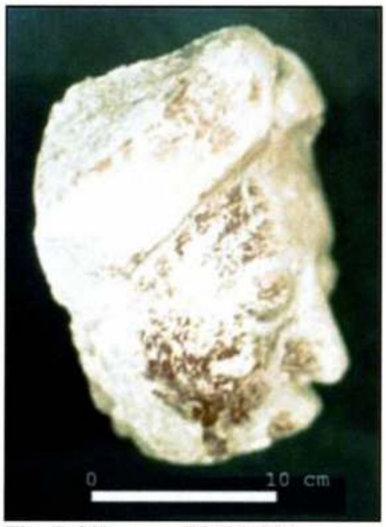


Fig. B-22b. **BM99-207.**
Side view.

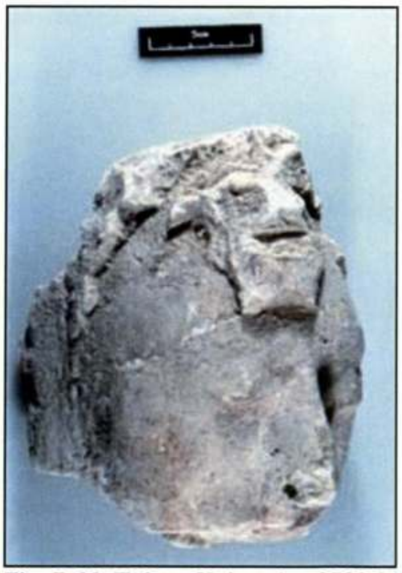


Fig. B-23. Tulane University, 3789.34.

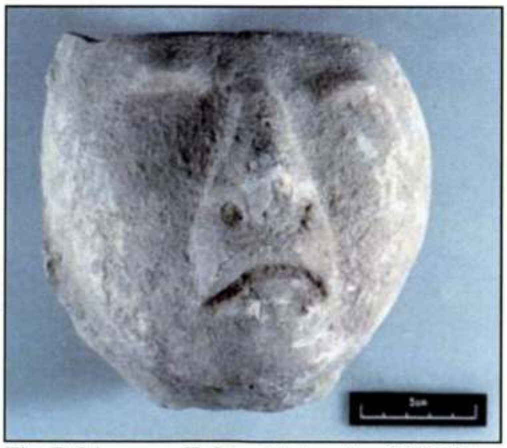
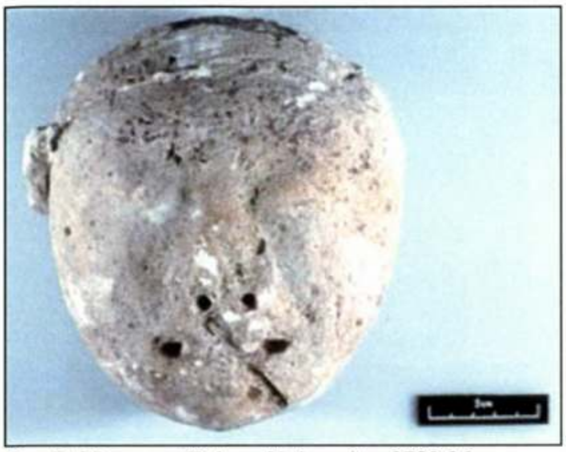


Fig. B-24. **Tulane University, 3689.35.**



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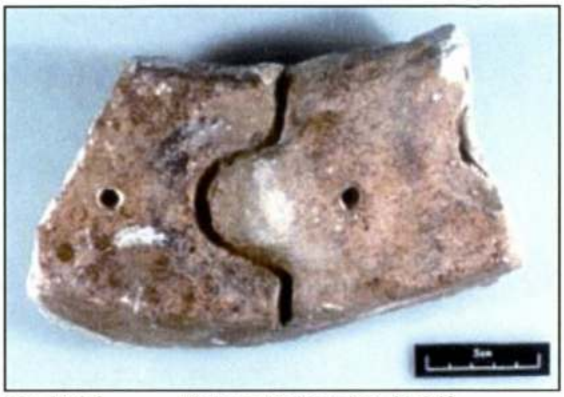
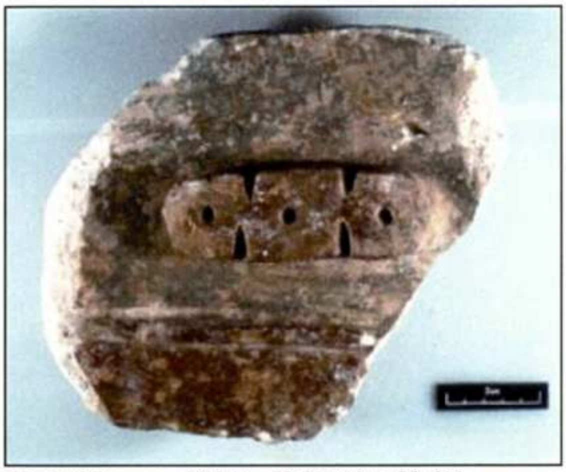


Fig. B-26. **Tulane University, 41.342.**



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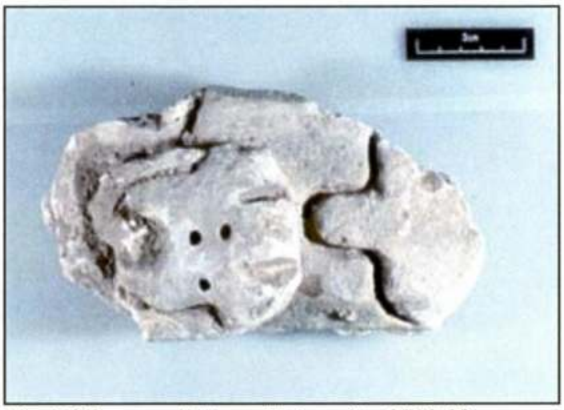
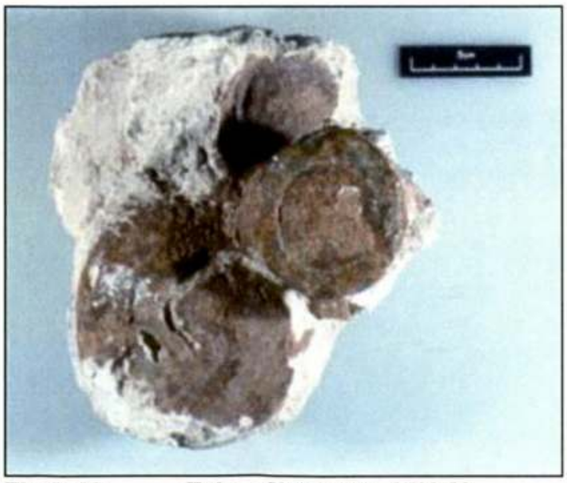


Fig. B-28. **Tulane University, 3792.38.**



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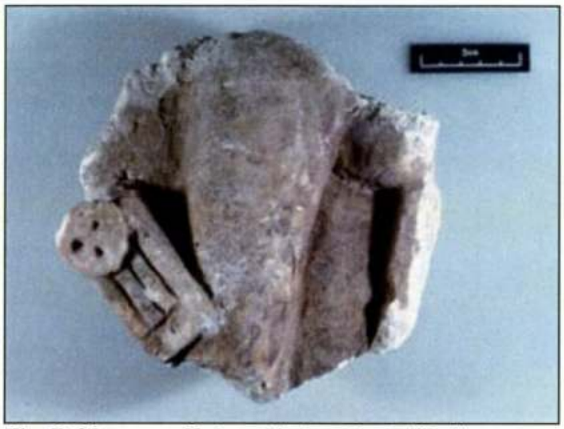
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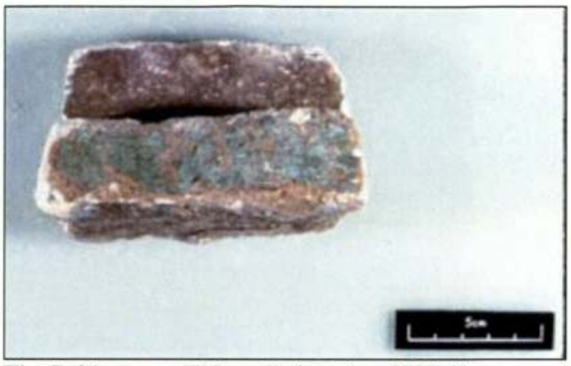
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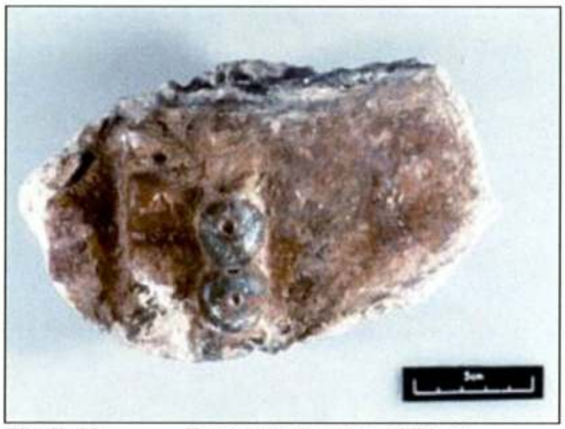
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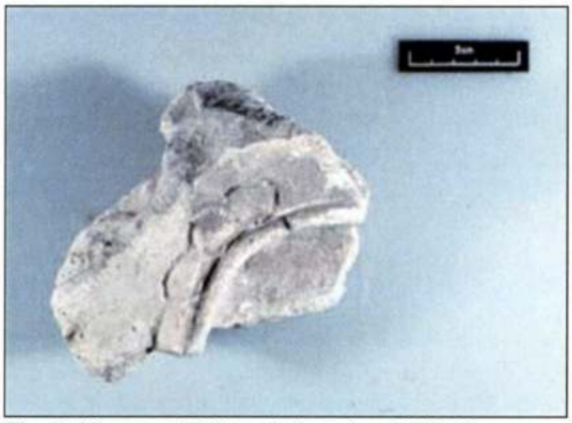
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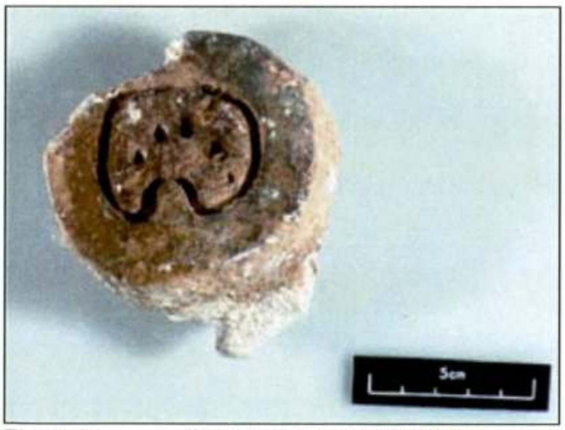

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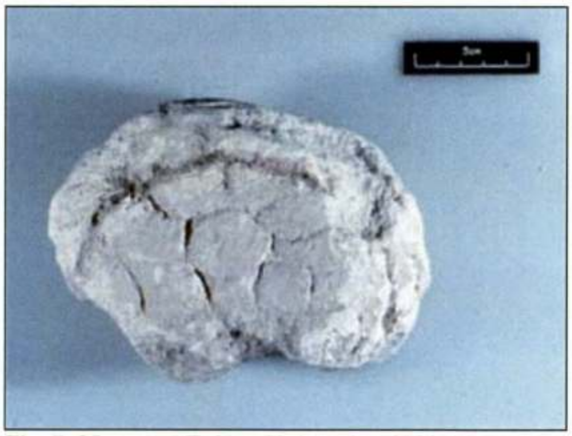
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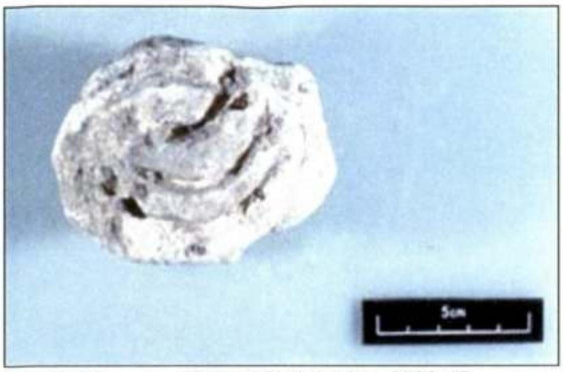

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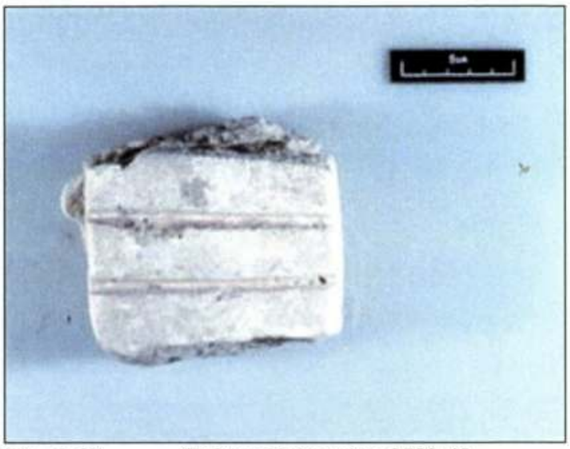
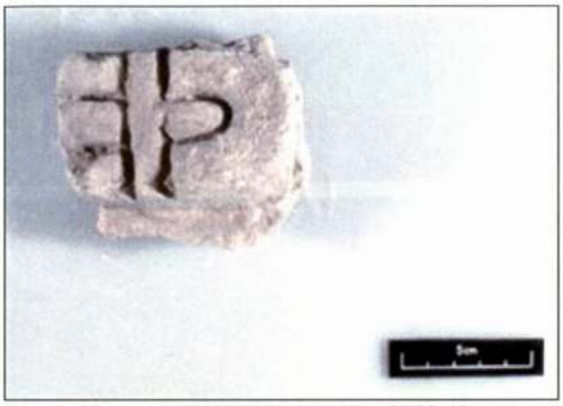


Fig. B-37. Tulane University, 3792.48.



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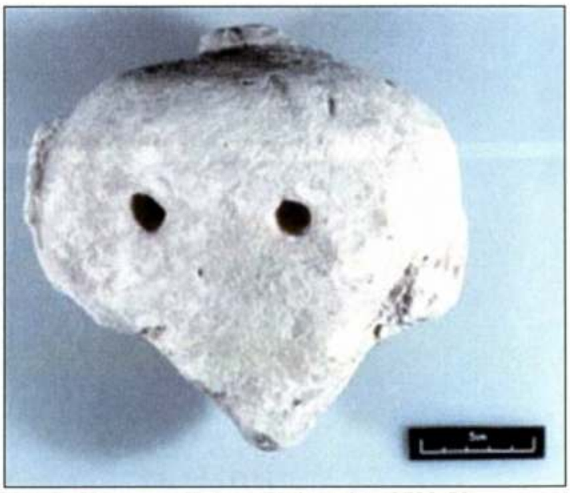

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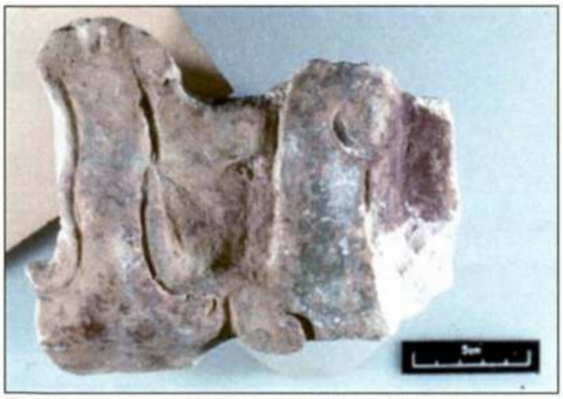

Fig. B-40. Tulane University, 3792.51.

Appendix C

The following ceramic analysis by Duncan Pring was conducted in the field in 2002 together with Lauren Sullivan. The sherds all belong to operation L07, where a Preclassic midden was uncovered.

Louisville Cream

38 rims etc. 32 body sherds:

Non glossy, relatively thick and creamy slip, (5YR 7/2 7/4 ranging to pinkish grey (7.5YR 7/4 to 5YR 7/6). Relatively narrow range of colour; some rootlet marks. In shape and slip texture this would be indistinguishable from Chicago Orange: Chucun variety but colour range is slightly paler. Prevailing form is a short to medium flaring necked jar with direct rim and square lip.

Forms:

1) Short – medium flaring necked jar with direct rim and square lip.
   Diameter 15 – 21 cm. Thickness: 0.7 cm – 1.1 cm. (22 sherds)
2) High flaring necked jar with direct rim, exterior beveled lip. Diameter: 18 cm. Neck height: 5.5 cm. Thickness: 0.7 cm.
3) Jar (13 sherds indicating jar neck break)
4) 1 large strap handle

Louisville Black

8 rims etc., 127 body sherds:

Dark grey-to-black, thin to glossy slip. Relatively homogeneous colour (7.5YR 3/1, 3/2 4/1, 10YR 2/1). Louisville buff would include some overlap into this type. One body sherd, with a glossy black slip (7.5YR 2.5/1), showed traces of resist decoration. Predominant form appears to be a jar.

Forms:

1) Medium flaring necked jar with direct rim and round lip. Height 3.9 cm. Diameter: 20 cm. Thickness 0.7 cm. (1 sherd)
2) Medium flaring necked jar with direct rim and square lip. Diameter: 40+ cm. Neck height: 5.2 cm. Thickness: 1 cm. (1 sherd)
3) Medium outcurving necked jar with direct rim, round lip. Diameter: 16 cm. Height: 3.3 cm. Thickness: 0.6 cm. (1 sherd)
4) Jar shoulders (3 sherds)
5) Spouts--one vertical cylinder spout. Diameter: 3.8 cm. Side thickness: 0.5 cm. The other is an angled spout with thick sides and a small hole: 0.5 cm. in diameter (2 sherds)

Louisville Black Pre-slip incised

4 sherds:

Circumferential pre-slip groove incising on "Louisville Black" vessels.

Forms:

1) Flaring sided vessel, direct rim, pointed lip. Diameter: 31 cm. Thickness: 0.8 cm. (1 sherd)
2) Outcurving sided vessel, direct, but thickened rim, pointed lip. Hole near rim of one. Diameter: 32 cm. Thickness: 0.6 cm. – 1.0 cm. (2 sherds)..
3) High flaring necked jar direct rim, round lip. Height 5.4 cm. Diameter 22 cm. Thickness: 0.8 cm. Faint pre-slip incising around rim on exterior (1 sherd)

Louisville Black Post-slip incised

5 sherds:

Circumferential post-slip incising at rim and on body of vessel.

Forms:

1) Vertical sided (bowl) with direct rim, round lip. Diameter: 14 cm. Thickness 0.5 cm.

4 other sherds with circumferential groove incising at rim and around body.

Louisville Buff

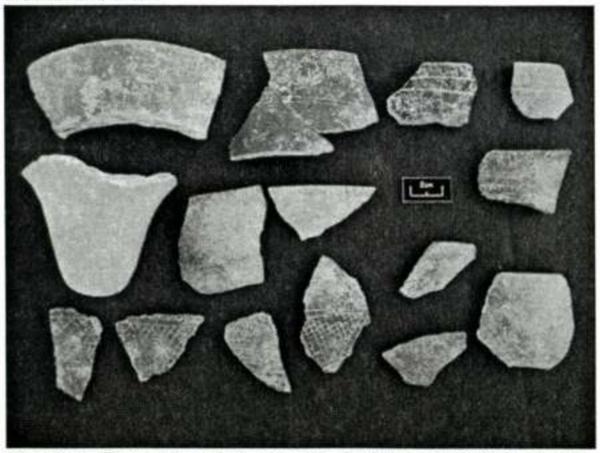

Fig. C-1. Examples of "Louisville Buff" and "Buff Incised" ceramics.

39 rims etc. 179 body sherds:

Non waxy, but non glossy slip ranging in colour from 7.5YR 4/3 through 6/4 to 4/2 and 6/4. At the darker end of the range, there is a potential overlap with Louisville Black, while at the lighter end, the colour runs into Louisville Cream. Occasional examples of more glossy slip suggest that the gloss may have worn off in others. There is evidence of burnishing but not patterned.

Forms:

1) Medium high, flaring necked jars direct rim and rounded lip. Diameter 21 – 28 cm. Thickness: 0.9 cm. (3 sherds)
2) Short flaring necked jar with direct rim, round lip. Diameter: 15 cm. Thickness: 0.5 cm. Height 2.7 cm. (1 sherd)
3) High neck jar, direct rim round lip. Diameter: 14 cm. Height: 5.7 cm. Thickness: 0.6 cm. (1 sherd)
4) Jar shoulder break (4 sherds)
5) Flat based, flaring sided vessel (4 sherds)
6) Incurving sided jar, direct rim, round lip (tecomate). Diameter: ? Thickness: 0.5 cm. (2 sherds)
7) Incurving sided bowl with flaring collar, direct rim, round lip. Diameter: 11 cm. Height of collar: 3.8 cm. Side thickness: 0.6 cm. (1 sherd)
8) Necked vessel (probably bottle) with interior thickened rim, round lip. Diameter: 5 cm. Thickness: 0.6 cm. (1 sherd)
9) Monopod foot (2 sherds)
10) Vertical or flaring sided vessel with direct rim and round lip. Diameter: ? Thickness: 0.6 cm. (1 sherd)
11) Round sided vessel (probably jar) with outcurving side

Louisville Buff Post-slip Incised
5 rims etc. 6 body sherds:
All pieces exhibit narrow post slip incising in lines or decorative patterns on buff surface.
6 body sherds display a relatively elaborate design, consisting of cross hatching in the form of triangles generally framed or outlined with pairs of lines.
Forms:

1) Recurved sided bowl with direct rim and round lip. Diameter: 17 cm. Thickness: 0.4 cm. Pair of crudely incised, narrow post-slip incised lines at rim on exterior and around middle of concave section (3 sherds)
2) Outcurving sided vessel with direct rim and round lip. Diameter: 24 cm. Vessel thickness: 0.8 cm. Crude, but broad (0.15 cm.) pair of post-slip groove incised lines on exterior below the rim (1 sherd)
3) Vertical sided vessel with exterior everted and thickened rim, exterior bevelled lip. Diameter: 15 cm. Thickness: 0.4 cm. 3 crude post-slip incised lines running circumferentially below the rim on exterior with groups of three lines diagonally pendent from lowest line (1 sherd).

Louisville Buff Pre-slip Incised
2 rims etc., 2 body sherds:
Pre-slip groove incising in circumferential lines around exteriors of bodies.

Forms:

1) Recurved sided vessel with direct rim and round lip. Diameter: 14 cm. Thickness: 0.6 cm. 3 circumferential groove incised lines around exterior below rim. (1 sherd)
2) Flaring sided vessel with direct rim, round lip. Diameter: 24 cm. Thickness: 0.8 cm. Thin pre-slip groove incisions circumferentially below rim on exterior (1 sherd)

Louisville Red-Orange

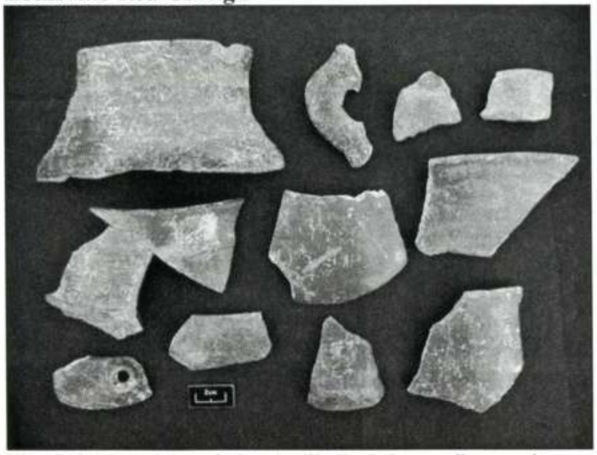

Fig. C-2. Examples of "Louisville Red-Orange" ceramics.

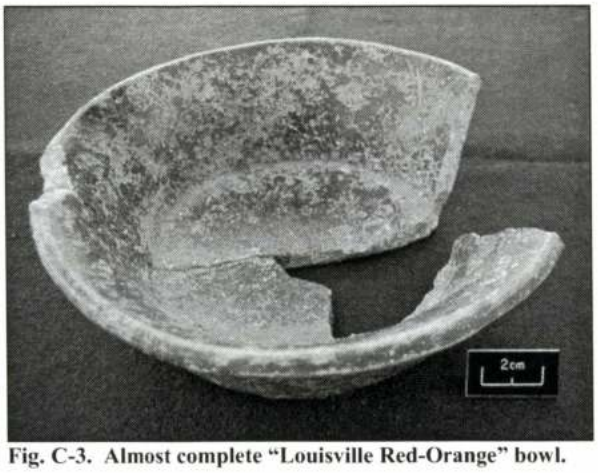

Fig. C-3. Almost complete "Louisville Red-Orange" bowl.

166 rims etc. 254 body sherds:
A relatively glossy and thin slip, not as glossy as Petén Gloss, but clearly removed from the waxy tradition. Relatively homogeneous colour, centred around a reddish orange, (2.5YR 6/8, 5/8, 5/6. Fireclouding into buff (10YR 7/6) or black (7.5YR 3/2) is present but not widespread. Some pieces in the collection appear to have been burnt and are therefore substantially darker, but they have been excluded from the colour range given above. Predominant form appears to be a flat based, flaring sided vessel with exterior folded rim. Tecomates are also reasonably frequent.

Forms:

1) (Flat based), flaring sided vessel with everted and exterior folded rim, round lip. Diameter range: 25 cm. – 40 + (45?) cm. Thickness: 0.5 – 0.9 cm. (smaller diameter is associated with thinner side) (43 sherds)
2) (Flat based), flaring sided vessel with exterior folded rim and round lip. Diameter range: 21 – 39 cm. Vessel thickness: 0.5 – 0.8 cm. (9 sherds)
3) (Flat based), outcurving sided vessel with direct or exterior thickened rim and round lip. 1 almost whole dish with flat base, direct rim and square lip.18 cm. Diameter, 5.3 cm. height and 0.9 cm wall thickness. Other rim sherds have diameter range of 17 – 35 cm. And body thickness of 0.7 – 1.0 cm., although one sherd is as thick as 1.4 cm. (11 sherds + 1 almost whole vessel)
4) Flat based, flaring sided plate with direct rim and square lip. Diameter: 25 cm. Height: 3.7 cm. Thickness: 0.7 cm. (1 sherd)
5) Flaring sided vessel with interior thickened rim and round lip. Diameter 25 cm. Thickness: 0.5 cm. (1 sherd)
6) Flaring sided vessel with direct rim, square lip. Diameter: 29 cm. Thickness: 0.6 cm. (1 sherd)
7) Flat based flaring sided vessel. (53 sherds)
8) Incurving sided vessel (tecomate) with direct or slightly thickened rim and round lip. Diameter: 11 – 15 cm. Thickness: 0.4 – 0.7 cm. (15 sherds)
9) Incurving sided vessel (tecomate) with small round section spout. Vessel thickness: 0.7 cm. (1 sherd)
10) Incurving sided vessel (tecomate) with gutter spout. Vessel thickness: 0.5 cm (1 sherd)
11) Incurving sided bowl with outcurving collar, direct rim and round lip. Chamfering along collar. Diameter: 16 cm. Vessel thickness: 0.6 cm. (1 sherd)
12) Short, flaring necked jar with direct rim, round lip. Diameter: 11 cm. Thickness: 0.5 cm. Neck height: 2.5 cm. (1 sherd)
13) Short, vertical necked jar with interior thickened rim, round lip. Diameter: 15 cm. Thickness: 0.5 cm (at thicker part). Neck height: 2 cm. (1 sherd)
14) Vertical sided vessel with everted rim, round lip. Diameter: 17 cm. Vessel thickness: 0.5 cm. (1 sherd)
15) Jar shoulder/neck break (3 sherds)
16) Rounded and hollow foot fragment (1 sherd)
17) Flattish based, flaring sided bowl with rounded base angle and chamfering (1 sherd)
18) Lug handle (1 sherd)
19) Possible handle, possible figurine fragment (1 sherd)

Louisville Red-Orange Special

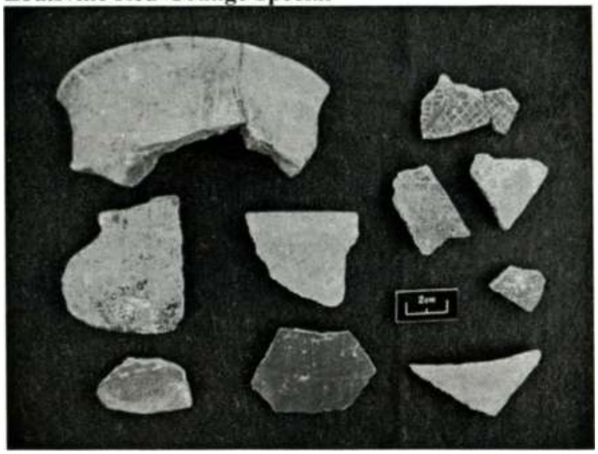

Fig. C-4. Examples of "Louisville Red-Orange Special" ceramics.

7 rims etc. 4 body sherds:
Similar surface colour and texture but with the addition of decoration, mostly post-slip incising. Incisions are crudely finished, indicating a low standard of craftsmanship. In one case the decoration is by resist rather than incising.

Forms:

1) Jar or shallow bowl with outcurving neck, slightly exterior thickened rim, round lip. Crude post-slip line around exterior just below the rim. Group of 10 lines below. Diameter: 14 cm. Vessel thickness: 0.7 cm. Height of neck: 4.5 cm. (2 sherds)
2) Flaring sided vessel with everted and exterior folded rim, round lip. Exterior has eroded slip, with diagonal gouge incising below rim. (1 sherd)
3) Vertical sided vessel with direct rim and pointed lip. Faint pre-slip groove incising on exterior below the rim. Diameter: 20 cm. Vessel thickness: 0.8 cm. (1 sherd)
4) Recurving sided jar with crude post-slip incising consisting of two circumferential lines at shoulder break with vertical lines above (1 sherd)
5) Boss handle with two parallel lines of punctation (1 sherd)
6) Incurving sided bowl (tecomate) with interior thickened rim and pointed lip. Faint traces of resist decoration in a circumferential band about 1.5 cm. below rim on exterior with trickle lines pendent from it. Interior is unslipped. Diameter: 11 cm. Vessel thickness: 0.6 cm. (1 sherd)

Additionally, there are 4 sherds with post slip incising, consisting of cross hatching, seemingly similar in design to that seen in "Louisville Buff Post-slip Incised".

Louisville Red-Orange and Cream

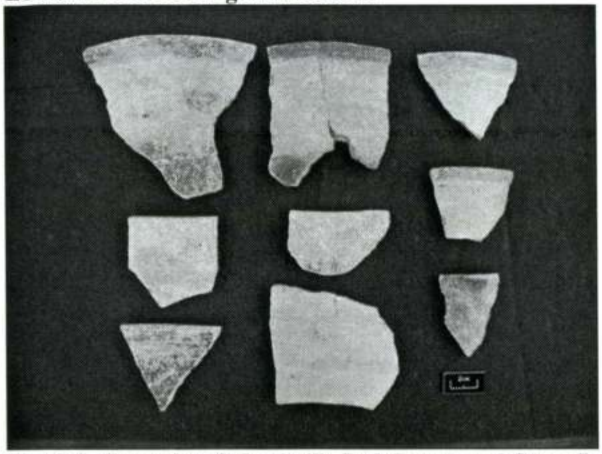

Fig. C-5. Examples of "Louisville Red-Orange and Cream" ceramics. The sherd in the center top row has organic resist decoration with a chevron design.

52 rims etc. 20 body sherds:

Sherds exhibit red-orange slip on part of surface whilst other parts of the vessel have a cream slip. The majority of pieces have red-orange on the interior of the vessel and cream on the exterior. On large pieces, where sufficient definition is possible, the cream decoration consists of a band, approximately 5 cm. thick beneath the rim. Below the cream band, the red-orange resumes. One piece has organic resist decoration with a chevron design in the cream band. One piece has chamfering. Both the red orange and the cream tend to be brighter in colour, ranging toward 2.5YR 5/8 (red-orange) and 5YR 8/1 8/2, 7.5YR 8/1 (cream). Again the predominant form appears to be a flat based flaring sided vessel with everted and exterior folded rim.

Forms:

1) Flaring sided vessel with everted and exterior folded rim, round lip. Interior of vessel and exterior of rim are slipped red-orange, while remainder of vessel is slipped cream. Diameter: 22-28 cm. Vessel thickness: 0.5 – 0.7 cm. (32 sherds)
2) Incurving sided bowl (tecomate) with interior thickened rim and round lip. Interior is slipped red and exterior is cream. Diameter: 19 cm. Vessel thickness: 0.6 cm. (1 sherd)
3) Vertical sided vessel with direct rim and round lip. Interior is red-orange and exterior cream. Diameter: 26 cm. Vessel thickness: 0.6 cm. (1 sherd)
4) Flaring sided vessel with everted and exterior folded rim and round lip. Interior slip is red-orange. On exterior, same red-orange extends across rim and there is then a cream band 5.5 cm wide, which contains a series of chevron designs achieved by organic resist. Below this, there is furher red-orange. Diameter: 26 cm. Vessel thickness: 0.8 cm. (1 sherd)

Additionally, 17 body sherds have red-orange on one side (interior) with cream on the other.

Nine sherds belong to flat based flaring or outcurving sided vessels with red-orange on interior and cream on exterior.

One sherd contains chamfering.

Some sherds have the cream slip on the interior with red-orange on the exterior:

Forms:

1) Flaring sided vessel with everted and exterior folded rim and round lip. Interior is cream and exterior is red-orange. In two cases, the red-orange extends slightly into the interior. Diameter: 32 – 40+ cm. Vessel thickness: 0.6 – 0.7 cm. (3 sherds)
2) Incurving sided vessel, probably bowl, with outcurving neck, interior thickened rim, round lip. Interior is slipped cream (though tending toward buff – 7.5YR 6/6). Exterior and across rim into top of interior is red-orange (2.5YR 5/8). At the medial angle (6 cm. below the rim) there is a squared ridge. Another, smaller, ridge is just below the outcurving neck (2.2 cm. below rim), while in between (4 cm. below the rim) there is a pre-slip groove incised line running circumferentially around the vessel. Diameter: 16 cm. Vessel thickness: 0.6 cm. (1 sherd)
3) Flaring sided vessel with direct rim, round lip. Cream decoration on the interior; red-orange on lip and exterior. Diameter: 13 cm. Vessel thickness: 0.6 cm. (1 sherd)
4) Vertical sided vessel (probably bottle) with direct rim and round lip. Interior is slipped cream. Exterior is red-orange with crude post-slip incised lines pendent from rim down to approximately 4.7 cm. Diameter: 7 cm. Vessel thickness: 0.6 cm. (1 sherd)

Two sherds with flat base and flaring sides have a cream base and a red-orange side or in one case part of the side is slipped cream and part red-orange.

Finally 2 sherds have red interior with cream exterior and trickle decoration one with red trickle and the other with rather more buff coloured trickle (7.5YR 4/3).

Louisville Unslipped

6 rims etc. 224 body sherds:

Diagnostic sherds include 2 jar shoulders and 2 flat-based vessels.

14 sherds demonstrate burnishing, mostly in bands but some pieces possess more elaborate decoration.

Additionally there were 19 sherds from the Sierra Group and 2 sherds from the Joventud Group.

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